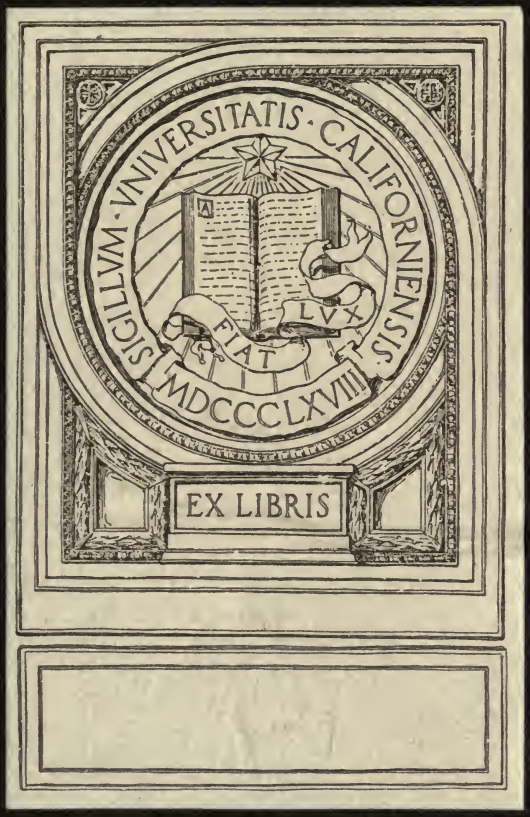
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COST ACCOUNTING

FOR INSTITUTIONS

BY

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INTRODUCTION

The first fact to realize with regard to a plan of cost accounting is that no *a priori* determination of exact methods can be made for any establishment. No two establishments are alike in all details, and a perfect plan for cost accounting in one will fail of perfect fitness in any other. Certain principles are fundamental, however, and may be indicated in a general plan. Discussion of these general principles unattached to a specific organization, on the other hand, would hardly be quite serviceable, for the principles so discussed would lack concreteness and definiteness to readers not already familiar with the application of such principles to specific cases. In this book effort has been made to discuss general principles and to apply them for illustration in certain specific types of institution—usually the most complicated type likely to be found in most communities. Yet the application here indicated may not fit exactly any particular institution even of that type, for certain assumptions must be made in the distribution of costs, and not all of these particular assumptions may hold valid in a particular case; but the author hopes that the careful and intelligent reader will be able to adjust the accounting plan here outlined to any particular circumstances of his need.

The plan outlined will appear to most persons extremely complicated and abounding in red tape. As expounded here, the plan undoubtedly is so; but many plans are much more simple in operation than in theory. It may take a page of text to describe a process performed in a few seconds of bookkeeping, and many varieties of transaction

must be suggested in such a treatise as this even though only one of them will be applied in any specific case. In order, again, to make the treatment comprehensive, effort has been made in this book to provide for virtually all types of contingency and of variation from the simplest type of organization, and therefore the discussion here is meant to cover at the same time the simple, the somewhat complex, and the extremely complex conditions of any establishment. Obviously a treatment intended to be comprehensive for such conditions must be in itself complicated, even though its application in a single case may be simple both in theory and in practice.

A glance at the forms and schedules may, again, suggest a vast amount of detail and of clerical labor in the keeping of records; but if one examines them carefully one will note that, although many of them are used daily or even oftener, others are used only weekly, some only monthly, and others only annually. If they could be arranged so that one would see at once only those in use at any particular time, one would observe that the number is not great, the labor is not prohibitive, and the cost is practically insignificant.

If any one should hesitate to introduce a cost-accounting plan in an institution for fear of the cost, he might substitute, for continuous use of the forms and accounts here indicated, an occasional or periodic use of them and so learn certain averages and standards. If, for instance, it were deemed inadvisable to keep a constant record for each meal of the special or occasional foods consumed, one might well use the forms here shown for certain specified periods, such as one week in a month or four isolated months in a year, and use the results for establishing ratios and averages. Similarly, one might keep temporarily certain subordinate-ledger accounts for details of expense

within departments (such as freight and supplies) and learn about what proportion of the total charges on those scores are attributable to certain departments, and then use those ratios, without further detailed accounting, over long periods. The system here shown, in other words, may be used in part without nullifying its value as a system. It is here made complex only that it may be made comprehensive. The text, again, suggests monthly closing of accounts. The plan is equally workable, though it cannot produce results so satisfactory, if accounts are closed annually.

A few illustrations of the possibilities of simplifying the plan shown herein are suggested by observation of the subdivision of many accounts. For hospitals, separate accounts are recommended for several kinds of nurses (superintending, graduate, special, and those in training), for orderlies, and for ward employees. Obviously, if one is not willing to go to the expense of making this separation, one may combine them all into a single account—though this by so much reduces the possibility of making a comparison of costs with hospitals where the conditions of nursing are different or the classification is more detailed. Similarly, separate accounts are shown here to cover maintenance of equipment, in the housekeeping department, for the dining-room, for the bedrooms, and for the general household. In many institutions this subdivision would be hardly worth while. In the accounts for libraries, again, separate wages costs are kept for administrative officers, cataloguers, order clerks, delivery clerks, etc. Commonly this subdivision would not be necessary. Every consolidation of accounts simplifies the accounting process, but by so much limits the information which the accounts may give; and therefore in this book divisions which under any ordinary circumstances are thought to be worth while are given in detail—not because the division is recommended in every case, but

merely in the desire to have it noted for the case when it is necessary, and with the thought that wherever it is undesirable consolidation will suggest itself as obvious.

Most of the illustrations used are for conditions likely to arise in hospitals; but most other institutions are subject not only to many conditions similar to those in hospitals, but also to other conditions which, though not similar in outward characteristics, are nevertheless capable of expression in the accounts by the application of similar principles. It is believed that few problems will arise in other institutions not capable of solution by the application of the principles indicated for hospitals. Nevertheless certain suggestions are made not only for specific accounts likely to be required in institutions other than hospitals, but also for the content of those accounts. In one or two instances illustrations are given of the method of drawing conclusions from such accounts in ways somewhat different from those desirable for hospitals. It would have been possible, of course, to treat every particular of the accounts from the point of view of hospitals, then from that of educational institutions, and lastly from that of hotels or clubs, and to gather into one place all lists of accounts, all forms, and all comments relating to any phase of the accounting; but that would have produced a treatise which would hardly be usable except for the theoretical student; for the treatment of accounts for no institution would be in connected form. For this reason the illustrations are taken for each chapter as a whole from the circumstances of hospitals, and then variations or additions for other institutions are suggested in a supplementary discussion.

No attempt is made in this book to describe the ordinary processes of bookkeeping, or to direct a person untrained as a bookkeeper in the method of making entries. Cost accounting cannot be done by persons who cannot

"keep books." So far as any higher type of bookkeeping is required here than that familiar to bookkeepers in institutions, the information regarding it should be easily obtainable from books dealing with the subject. This plan presupposes the bookkeeper's knowledge of special-column cash books, of voucher registers, of subordinate ledgers, and of controlling accounts. Some one in any institution should have a general knowledge of bookkeeping and accounting principles; but he needs no more technical or detailed knowledge than can be obtained from the general chapters in the author's book entitled "Accounts: Their Construction and Interpretation," and from the treatment there of one or two special subjects (such as accounting for investments) related to institutional affairs.

The general principles here worked out have been recommended by a committee of persons interested in institutional management. Appendix E gives a copy of the report of that committee (on uniform accounting for institutions) at the Lake Placid Conference in June, 1912. The author is indebted to the persons whose names appear in that report, and to many others, for valuable suggestions.

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UNIV. OF CALIFORNIA

COST ACCOUNTING FOR INSTITUTIONS

CHAPTER I

GENERAL PRINCIPLES

Cost accounting attempts to help managers in answering three sorts of questions: first, how may prices be adjusted to the service rendered; second, does the utmost economy prevail in production and service, and if not how may one trace the waste; and, third, had certain work best be performed in the establishment or outside?

Adjustment of Prices to Services Rendered

As illustration of the first of these, need arises for some scientific method of fixing prices of rooms in college dormitories and in hospitals so that the prices paid shall be adjusted to the comparative value of the rooms furnished. It may be true, of course, that in many cases prices are determined by what in railroading is called "charging what the traffic will bear." Thus, although it would normally seem that in some cases a higher price ought to be fixed, putting the charge on the same basis as that used for other services would in reality make the charge prohibitive, and so adjustment is made to that fact. In such a case the price must be lower than that which ought ordinarily to be charged, and that reduction in price is really in the

nature of a rebate. If the accounting is serviceable, however, it will make note of both facts—that is, that the actual cost of rendering the service is high in that case, and that the price charged does not bear the same relation to cost that price bears in other cases. Unless the accounting takes note of both facts, it fails to tell the truth. It may indeed happen that the price is lower than normal for reasons of policy. In a certain hospital the prices charged for certain private rooms are really lower than on any basis of cost they ought to be. The managers have established such a scale with the distinct purpose of encouraging persons of means to come to the hospital for treatment; for they believe that the service rendered will be deemed so valuable, and the interest aroused in the hospital so great, that these persons will become valuable friends of the institution and their influence will increase subscriptions and endowment. This may or may not be wise policy, but good accounting requires that some note shall be taken of the fact.

Economy of Operations

An illustration of the second sort of problem which cost accounting should help to solve is economy in laundry work. If it is found in any institution that the cost for laundry is 20 per cent higher than the average for other institutions, the manager is not doing his duty unless he learns why this is so and whether it can be prevented. The conditions may be such that there is no escape. Then the question arises whether it would be cheaper to have the laundry work done outside.

Economy of Results

As an illustration of the third sort of problem we may take that which arises in many institutions concerning unused land. Most institutions have a considerable tract of

land for air, light, and prospect, and much of this could be utilized for raising at least some summer vegetables. In many cases where this has been done the apparent cost of food has been much reduced. Yet it is impossible to know whether the actual cost of food has been reduced unless one can know what is the expense for labor attributable directly to the vegetables raised. If the engineer or other employees have much leisure during the summer and that leisure can be devoted to this use, gardening of this sort is likely to be profitable. Only careful accounting can determine just when it is so under these or any other circumstances.

Comparison of Results

All three of these purposes of cost accounting demand that costs be known as exactly as possible; and the second of these demands that a manager shall know not only the cost in his own institution but in a great many others, for only then can he make comparisons between his own establishment and others, and learn whether his costs are excessive. One encouraging feature in institutional service as compared with commercial service is the fact that the only rivalry that can be acknowledged—at least with a good face—is rivalry in efficiency. Every good institution is interested in institutional progress, and is glad to conduct experiments and share results with other institutions. Indeed, institutional progress would have been far slower if there had not been something of a professional spirit at work. Professional ethics demand that each person in charge of an institution shall have not only something of scientific eagerness to learn how things can best be done, but also altruism enough to help others to benefit by his experience. In order to make possible comparisons of institutions under somewhat similar conditions, a uniform scheme of accounting is essential. This means, moreover,

something more than a uniform scheme of accounts; for even institutions with accounts of identical names may have results which are not at all comparable; uniformity must extend to the content of the accounts even more than to their forms and names. Before results can be made at all comparable, we must be sure that in all institutions under consideration exactly the same kinds of things are charged to each account.

Uniformity of Accounts

Virtually every institution manager who is subject to trustees or other superiors is eager for additional funds, for he believes that work can be done more economically or at least more satisfactorily with larger capital. The most efficient instrument for inducing trustees to supply needed funds is a statement of financial results which shows not only the exact cost of each kind of service rendered, but also how each cost is related to the corresponding cost in other institutions. Trustees are usually business men who know the value of a dollar. They wish to know definite facts about the yield of the dollars entrusted to them, and they are far more interested in these than in any hypotheses and managerial ambitions. Every institution has some advantages over other institutions, and every institution has some handicaps; but the good manager will attempt to learn by concrete figures exactly what are his handicaps and what they cost, and what are the actual savings from his advantages. He should not allow the handicaps for which circumstances—or the trustees—are responsible to swallow up the gains for which the credit is properly his. Until uniform accounting, or at least something approaching it, becomes common, no manager will be in a position to make clear to his trustees just what are the

handicaps under which he is working and just what are the economies that have resulted from his management.

As an illustration, a certain hospital turns away paying patients for lack of room, and yet gives its superintendent private quarters which, if let to private-room patients, would yield several hundred dollars weekly; total costs in this hospital are not only far above its income, but high in comparison with those of other hospitals of its class. Another hospital nearby, practically self-supporting, gives its superintendent quarters worth not half so much; yet the hospital giving its superintendent expensive quarters shows *by the books* a lower administrative cost than the other. The books very clearly do not show the facts. The objection is not necessarily to the spacious quarters, but to the fact that the accounts take no cognizance, in the administrative cost, of anything but salary, and therefore the result of this extravagance of space does not appear, and a comparison of the two sets of accounts is sadly misleading. Comparisons of accounts when the method of accounting is different are worse than useless, for they may show an advantage where there is really a handicap.

It should be understood, moreover, that accounting has nothing whatever to do with questions of policy. To give palatial quarters may be wise, but the purpose of accounting is to tell about business transactions the truth as exactly as it can be learned, and the determination of the truth should be without respect to persons, prejudices, or policies.

Determination of Costs—Direct Charges

Let us now turn to the methods of learning costs. First, the accounts for each department having an exclusive function should be as far as possible distinct from those for every other department. The steward's department, for

illustration, is concerned with food in a more or less raw state—except, perchance, so far as food is purchased necessarily in a cooked state, as are shredded wheat and numerous other cereals. It may chance that in some institution the purchasing is careless and therefore the costs high, and yet the cooking is extremely economical. In such a case, unless a distinction is made between the steward's department and the kitchen department, the gross cost for table board, if only that figure is preserved, may be normal, and so hide the fact that one department is well managed and the other ill. The kitchen should be charged for the cost of cooking food and for that alone; this should include the cost of fuel, labor, repairs, etc. The serving of food, again, should not be confused with purchase and cooking, for in some cases there is very great wastefulness in the unfortunate arrangement of the establishment, so that the cost of service brings up the total cost of food in spite of the fact that both the purchasing department and the cooking department are well managed. Costs should be found for each department.

The expense of the purely housekeeping items, such as sweeping, dusting, and scrubbing, should not be confused with other expenses. Where some of this work is done by persons employed primarily in other departments, as is often the case in hospitals where the nurses have charge of patients' rooms, an attempt should be made to distinguish between that part of the nurses' wages which is for professional care of patients and that which is for housekeeping. At least it is true that the cost of taking care of the general rooms, such as halls, stairways, reception rooms, assembly rooms, etc., should be carried distinct from the cost of the care of private rooms. Laundry charges should be carried distinct from all others, and should include fuel, soap, starch, labor, etc.

The cost of the care of grounds should be separately determined; this would ordinarily include the care of flower beds, the mowing of lawns, shoveling snow from walks, etc. This appears on its face to be a small item, but obviously an institution having large grounds with many walks has a very much heavier charge in this respect than others, and a manager who is judged by his total cost per resident-day is handicapped as compared with a manager who has no expensive grounds to care for; he should be able to point out to the trustees of his institution just what it costs to maintain its external attractiveness. Separate accounts should be kept for maintenance of buildings and for maintenance of equipment. Of course, as in all business operations, separate accounts should be kept for taxes, insurance, water, gas, electric light, legal expenses, etc.

Determination of Costs—Indirect Charges

Such accounts as those just mentioned may be called "primary accounts." They require nothing more than simple bookkeeping. We must next pass to matters less obvious, for we must make an analysis of transactions and provide for the distribution of indirect charges. In order that we may know what are the exact costs for various kinds of service, we must learn not only the total direct costs, but the cost of each of many separate items, some of which may be indirect and apparently remote. We must distribute most of what are commonly called "overhead" costs —that is, costs incurred for several services in common— also called "burden," and "joint costs," among the various departments.

To say that we must know the difference in cost for employees between a seven-by-seven bed-room and a ten-by-twelve bed-room is not to recommend the seven-by-seven bed-room; it is only to say that we must know what

we are getting for the money spent. All the costs which are indirectly incurred for any department should be ultimately carried to the accounts of that department. It will cost more to do the laundry work in an establishment paying its laundresses such high wages that they can live comfortably in rooms which they must hire in the neighborhood at normal city lodging-house prices than in an institution where the laundresses are boarded on the premises; and if the accounts in both of these cases charge to the laundry department only the actual money-wages paid, one will show a high labor cost and the other a cost singularly low. Before any comparison can be made between the two cases, therefore, the laundry accounts must be brought to a common basis, and the cost figures for laundry work must include not only the obvious primary costs, like fuel, supplies and wages, but also a charge for laundry space, for laundresses' rooms, for food (including cooking and serving) served to laundresses, for lighting, for heating, etc., and we must realize that the cost of the rooms should include not only their care but a share of insurance, taxes, depreciation, etc., on the cost of the building. This sort of indirect cost prevails throughout most institutions, and the importance of provision for its distribution should not be slighted.

Classification of Cost Figures

Figures of cost should be classified not on the basis of the objects with which they happen to be identified, but on the basis of the purpose which the expenditure was incurred to serve. The purpose of an institution is to serve guests, or students, or patients, or inmates. We wish to know, as our final figures, the cost, per capita, for food, for shelter, for laundry, etc., for those residents for whom the institution is maintained. Services performed for em-

ployees are incidental, as a part of wages, to the prime function of the institution. The accounts should be kept so as to distinguish the incidental from the functional. So the figure of compensation for all employees should include not merely wages but everything else in the nature of compensation, such as board, lodging, and laundry. On the final summary of patient-day costs, or guest-day costs, should appear all the costs for each group of expenses, such as administration, professional care, lodging, board, and laundry; and these are made up in part of items in lieu of wages for employees in several departments. These items not only should get into the *departmental* costs, and thence *indirectly* into the patient or guest costs, but should *not* get into the *direct* costs for patients, guests, etc. The cost of food for a laundress is not guest-food-cost, but a guest-laundry-cost; and the cost of laundry for a cook is not a guest-laundry-cost, but a guest-cooking-cost. It is absurd that an institution having many servants and a rather scanty commissary should show as high a cost for food as an institution having few servants and a much better standard of living; and yet, if we fail to distinguish between the board of employees and that of guests, a large number of servants would raise the figure naturally interpreted to represent the cost of supplying guests with food, without in the least resulting from better or more abundant food supplied to guests' tables.

Requirements of Cost Accounting

This sounds very complicated, and the reader may look with much skepticism upon the desirability of doing so much accounting. It is true that many bookkeepers are not competent to devise systems which shall give a great mass of detail without an inordinate amount of time and manuscript. It is very difficult, on the other hand, for a person not familiar with bookkeeping processes to realize that a

great deal of information may be recorded and correlated and preserved with very little labor—if the bookkeeping system is adapted to the specific needs of the case. Adequate accounts cannot be kept without adequate bookkeeping, and no one should think for a moment that a proper system of accounting can be introduced in any sort of institution merely by the addition of a little untrained labor. The person in charge of the accounts must know not only what are the common labor-saving devices of bookkeeping, but also what fundamental accounting principles must be observed in drawing final conclusions from the records. With such supervision, however, it is possible to devise a plan which can be carried out by persons not particularly skilled in the handling of accounts, and to get results, for various institutions, that make possible a really valuable comparison between them. When a good system has once been devised, it is not a laborious task to make proper charges for direct costs or to make proper distribution of secondary costs, and no extensive bookkeeping is involved. An outline of the method is given, in connection with the desired accounts, in the pages following.

Distribution of Space Costs

When the primary accounts have been charged with the obvious items of cost, we have merely to subdivide the total of those which stand at the foundation of the whole institution and distribute them on an equitable basis among the various departments. For illustration, insurance on buildings, taxes on buildings, depreciation of buildings, and repairs of buildings, are shared by the various departments in the ratio of the building space occupied. Commonly the square foot of floor space is a satisfactory unit for distribution—unless, indeed, it chances that some stories are higher than others or some buildings are less expensive

than others. It is obvious that if the first story has a height of twelve feet, the second ten, and the third eight, it is hardly fair to distribute room costs on the basis of floor space alone, for the expense of the structure lies in height quite as well as in horizontal dimension. Ordinarily, too, an upper floor is less desirable than a lower. In the matter of cleaning, window space and wall space may be quite as important as floor space. The actual distribution must be determined in every case by the circumstances of that case, and when the principle has once been recognized there is likely to be very little serious discrepancy as between institutions.

Distribution of Food and Service Costs

The most complicated figure to distribute between departments is likely to be that for food costs—at least in an institution supplying several kinds of diet. In a hospital, for instance, there is likely to be a table for house officers, at which may or may not be served the same sort of food as that served ordinarily to patients in private rooms; next in order is likely to come the regular house diet for patients in wards and for nurses; next may come the coarser diet for non-professional employees; and last, the fever or liquid diet. Many institution managers will say that the attempt to learn just how much food goes to each of these groups of diet would cost more than the value of the information would warrant. Others have learned it and profited at small cost, for much of the needed information is—or should be—at hand. In any accounting worthy of the name careful store records are kept. Everything going into the store-room is debited, and everything going out is credited. Many things go out of the store-room for use in all four classes of diet mentioned, and many others go out for the use of only one of them; but it is always some-

one's business to know the destination of everything issued. The housekeeper or dietitian or someone else must regularly provide a list of foods required, as a guide in the preparation of meals, and the only labor necessary for learning costs is that of entering the amount consumed, the price, and the product. The calculation may, of course, be made at convenient intervals in the general office, and each department may then be charged for its share.

We may learn kitchen cost by taking the sum of the space cost of the kitchen, cooks' wages, fuel cost, rooms and board of cooks, etc. Serving cost, housekeeping cost, laundry cost, and dormitory costs may be similarly learned. The sum of these gives us the total cost per resident-day, in the terms of cost for each particular service rendered. This is obviously our final figure, the ultimate thing sought —for all the departments are subservient to the residents. As we go along, however, we determine for each department its own cost, in order that we may know whether it is most economically managed.

Subdivision of Accounts

Under the method of primary and secondary accounts outlined above, any number of subdivisions may be made; and even with uniform accounting an institution desiring to trace any detailed costs may make as many subdivisions as it likes without destroying the uniformity, if only its subdivisions are based on the uniform plan—that is, are capable of combination to produce a total identical in significance with that of the institutions which have not made subdivisions. The minute subdivisions would ordinarily be kept for purposes of comparison one year with another within the institution, whereas the figures for groups as a whole would ordinarily be kept for comparison with those for other institutions. It is not ordinarily possible to com-

pare detailed figures with those for other institutions, for conditions are widely different. Total laundry costs per resident-day, for instance, may well be compared between institutions, but the cost of fuel is likely to be useful chiefly for comparison within the institution itself; for one laundry may use coal, another wood, another gas, another oil, another electricity, and another steam.

Conditions of Effective Cost Comparison

Accounting is something more, however, than determining mere financial facts. Statistics are of great importance in making it possible to learn why differences in costs persist. With regard to food, for instance, it is true that institutions in some places are able to buy meats much more cheaply than others, but suffer a considerable loss in comparison with others in the purchase of groceries. Differences are very great with regard to dairy products. If, then, we are going to compare food costs and get results worth anything, we must know something of the conditions under which each institution operates. We need to know not only what prices it is forced to pay, but also what is the prevailing tendency in that institution with regard to the kind of diet furnished. For this purpose it is well to keep statistical figures for the average price of several groups of food—such, for instance, as beef, mutton, lamb, fowl, butter, milk, eggs, etc. To these may well be added the average price per pound for certain staple articles like flour, sugar, tea, coffee. Lastly, in order that the records may show the relative importance of various classes of food in the total cost of diet, the total expenditure in each of many groups should be reported. This suggests the need of maintaining many detailed accounts for food costs in the steward's department. Conclusions from these accounts show surprising differences between different institutions.

If any establishment shows a conspicuously low purchasing power of money, that fact should stand out so clearly that the reason is sure to be investigated.

Innumerable other statistics not burdensome to compile are valuable as guides in determining comparative costs. For illustration, the number of pieces of laundry work, distinguishing the character—as by separate count for sheets, towels, pillow slips, etc.—is important if per capita costs are to be compared. The area of garden plots, of lawn to be mown, and of walks to be kept free of snow, are convenient figures. The area of floors swept weekly per capita gives a hint as to the comparative cost of housekeeping labor. Many of these figures, such as areas and ratios of area, are practically unchanging, and calculations once made are good for months or years. When ratios need to be applied to changing monthly totals, calculating devices like the slide-rule and adding machines may be utilized so as almost to eliminate clerical cost.

Institutional Products

Question often arises as to the treatment of construction work performed or product raised within the institution itself—as by carpenters or by gardeners or farmers. Shall these be debited to the proper accounts at cost, or at market price (crediting, of course, the producing departments)? In view of the fact that the purpose of accounting in institutions is usually to get costs, the former is the logical answer; but, in view of the difficulty, in many cases, of learning costs, the latter is often the practical answer. Possibly the hardest costs to learn in all enterprises are farm costs, for they are singularly interwoven. To learn costs in an institution owning farms might mean a complicated accounting system within a system. In such a case, unless the farms are of sufficient importance in themselves

to be worth a complete cost-accounting system, the obvious practical method is to charge departments for products at market prices and credit the farms with the earning. When, however, the product is incidental, like vegetables or fruit raised on land otherwise idle, it is well to charge the cost of cultivation to the accounts representing the product—as fresh vegetables, or fresh fruit.

Advantages of Comparison

The advantages of uniformity should not be neglected. No man ever progressed far if he relied wholly on what he learned by his own experience. It is absurd to spend time and money learning for oneself what one's neighbors learned years ago—or even what they are now learning. If they are conducting experiments in some lines, one can most profitably conduct experiments in another. Then a comparison of notes teaches each what the others have learned. Only with uniformity, however, can one ever compare significant notes with one's neighbor and profit by the other's experiments.

CHAPTER II

THE BALANCE SHEET

It has sometimes been said that it is not only unnecessary but undesirable for institutions having a charitable nature to show capital accounts; for the prime purpose of such institutions is not to show solvency, but to show accomplishment, and the prime purpose of a balance sheet showing capital accounts is to indicate that the corporation is able, either immediately or ultimately, to pay its debts. One may even go so far as to say that such an institution should always show a deficit, for it always should do a little more than it can afford to do—and so make the public see its needs. This is true, but other considerations make it desirable to show detailed capital accounts.

Purpose of the Balance Sheet

The purpose of a balance sheet is not merely to show solvency, but quite as much to show accountability, and an institution is responsible not merely to produce results in the way of service and product, but also to show that for everything entrusted to it, especially for endowment or other capital funds, it has something of value. In order, moreover, to show whether the amount of capital invested is out of proportion to the amount of product or service rendered, and whether that investment is of a type properly subject to one or another rate of depreciation, it should indicate not only the total amount of capital investment, but the various subdivisions of that investment among

the various departments of the institution. It has happened often that an institution has suffered a high operating cost because it has been inadequately supplied with facilities; it has been obliged to pay heavily in wages for work done by hand that might much more economically have been done by machinery. It has occasionally happened, on the other hand, that an institution has enjoyed a very low operating cost because work has been done in large part by expensive equipment employing little hand labor. A proper judgment between these two methods of operation can be made only when interest,* depreciation, and other charges due to capital investment, are considered in the ultimate costs of operation; and since we must have a basis for figuring interest, depreciation, etc., we must know the value of the equipment in each department; this should be shown either on the balance sheet or on a schedule appended to that sheet.

For these reasons it is desirable that every institution shall maintain a complete balance sheet indicating what it has to show for all property entrusted to it, what it has invested in various types of institution property, what it has invested in interest- or dividend-bearing securities, and finally what current items go to make a complete statement of resources and liabilities.

Publication of Balance Sheets

Whether the institution shall publish such a sheet, however, must be determined by policy. If an institution now exempt from taxation, because it is rendering a public service, is misjudged by a group of citizens who clamor for taxation of it, the publication of a balance sheet might be unwise; similarly if the institution is supported in large part by persons who have no idea of the cost of large enterprises, publication of the amount of assets—because likely to make people think it much better supplied with funds

* See page 103.

and facilities than it really is—would be unwise; yet, on the other hand, if it is supported by intelligent people who know the nature of its need, the publication of the full balance sheet might lead to the raising of more adequate funds because of the obvious discrepancy between available capital and the facilities needed for the work undertaken. In general, however, it pays to be absolutely above-board. Nothing goes farther to destroy confidence in an institution than a suspicion that something is under cover.

Illustrative Balance Sheet

It would be possible, but confusing, to show here a form of balance sheet that should include all items likely to occur for any type of institution; but since such a form would include for each type of institution many items that would occur in no other case (as, for example, for clubs and hotels, for educational institutions, etc.), such a sheet would be very cumbersome and would look not at all like the sheet for any particular institution. The illustration given on page 28 is for a hospital, and is chosen because hospitals cover more lines of activity than most other types of institution. One can easily see what items for any other institution would be substituted for certain items shown here. Suggestions for such substitutions follow the balance sheet. Since, even for one type of institution, details are likely to cumber any statement, items of a similar sort are grouped in the form here shown, and provision is made for a supporting schedule, or appendix, for each group needing further elucidation.

The discussion of the items appearing on a hospital balance sheet is intended to indicate the general principles of classification, not only for this type of institution but for all; and it is therefore of general application. The hospital is chosen simply as the best means of illustrating the princi-

ples, and all general discussion of these principles will be found in this chapter.

Classification of Capital and Expense Accounts

The capital items for hospital property are divided, under the plan explained in detail in the following pages, into fourteen accounts. These various accounts—summarized on pages 24–26—are determined by the same sort of classification as that used for current expenses, and every department which has any equipment or property of sufficient value to be really recognizable as belonging to that department exclusively has accounts both for that property and for current expenses. The division between departments, both for capital and expense items (the order followed here is the logical order for expense accounts rather than for capital accounts, but simplicity will be attained by following it for capital accounts also), is based on the following principles:

(a) Administration

The administrative department is charged, both for equipment and for expenses, with the cost of those things which serve the general administrative purposes of the institution as a whole—including those things which serve all departments.

(b) Apparatus and Instruments

The charges to the capital account for apparatus and instruments cover everything of the nature of permanent medical and surgical equipment (supplies rapidly consumed are charged to the expense account for this department); but only things used directly in the professional care of patients should be charged in this group. As indicated in the table, when the pathological laboratory and the home

nursing department have little equipment, the costs of equipment for them may well be included with the cost of permanent apparatus and instruments; but expenditure for running expenses should be shown separately for each.

(c) Dispensary

The dispensary, or out-patient department, serves an entirely different type of need from that of the hospital as a whole, and consequently its costs, whether capital or current, should be separately reported.

(d) Emergency Department

The emergency department may be similarly situated; but if there is not a separately maintained department, no accounts should be kept for the items naturally falling into this group, for if a distinction cannot be made with fair completeness between emergency work, dispensary work, and ordinary care of patients, the distinction should not be made at all.

(e) X-Ray Department

The X-Ray department is naturally entirely distinct from the other departments, at least so far as its equipment is concerned; and it may be easily kept distinct for its current expenses, if only reasonable care is taken to distinguish its supplies, wages, and other items from those of other departments.

(f) Training School

The training school is one of the departments hardest to place in a uniform scheme of accounting; for it serves a double function and has connected with it two types of expenditure and at least one type of income. The most logical division of its functions considers anything afforded personally to nurses in training (either wages—when any

are paid—or clothing, laundry, board, and equipment) as a cost of nursing, and therefore chargeable under the head of professional care of patients; but it considers expenditure for purposes of teaching (whether wages of teachers, equipment for class rooms, books, magazines, maintenance —including lighting and heating—of class rooms), though incurred directly as a means of obtaining nurses and giving them compensation, as an educational cost—to be separately reported, so that the purely educational features of the cost of maintaining nurses in training may be compared between different institutions and between different periods in the same institution. Both are costs of nursing, but the cost of the two phases of expense should be shown separately for statistical use.

(g) Household

Household expenditures are divided into several groups. The housekeeping department is responsible primarily for cleanliness and order, and its expenditures should be distinguished from those for the kitchen, the laundry, and the steward's department, as well as from those for repairs of buildings, for heating, for lighting, etc.; for in order to make comparisons we must have costs in rather detailed groups. The housekeeping department has charge of the equipment and care of dormitories, dining-rooms, reception rooms, halls, etc., and of the cleaning of the house in general.*

* The order in which departments are here named is that used in the New York plan of hospital accounting, to which reference will be made hereafter. Since the author is urging uniformity, he has desired to accept with as little change as possible any plan of uniformity, already in use, that will produce the desired results. The New York plan is excellent as far as it goes. Though the order of accounts is not of much importance, it is of great importance that in any establishment the same order be always followed in all lists, records, etc.; for the waste of time in hunting for a desired figure when no specific place belongs to that figure is serious. A more logical order, and that recommended, is to list the household departments as follows: (1) steward's, (2) kitchen, (3) housekeeping, (4) laundry; and that order is followed in the rest of the text.

(h) Kitchen

The kitchen department is concerned solely with the preparation of food, and nothing which is not a cost of cooking should be charged to that department, either for capital or for current expenses.

(i) Laundry

The laundry department has so distinct a function that there is no danger of confusion between it and others if only one remembers that a charge is made under good accounting not on the basis of the article with which the charge is connected, but on the basis of the purpose which it serves; for example, pails used for scrubbing about the halls are chargeable to Housekeeping Equipment, pails used in the preparation of food are chargeable to Kitchen Equipment, pails used in the laundry are chargeable to Laundry Equipment, and pails used in the store-room for handling foods are chargeable to Steward's Equipment; and similarly so-called laundry soap used for general cleaning purposes is chargeable to housekeeping-department expense, soap used for washing dishes is chargeable to kitchen-department expense, and soap used for laundering is chargeable to laundry-department expense.

(j) Steward's Department

Just as the kitchen is employed solely in the preparation of food, so the steward's department is concerned solely with purchase and delivery of food. (The store-room delivers to the kitchen, the kitchen delivers to the household department, and the household department delivers to the consumer.) Steward's Department Equipment is shown as a capital item on the first half of the balance sheet, but supplies of food are carried among the current items as general material on hand.

(k) Machinery and Tools

The account for machinery and tools should record virtually all removable equipment not an essential portion of the buildings or of the equipment used for professional or household purposes; this should be kept separate from the building and improvements because a different rate of depreciation as well as a different rate of insurance is likely to be chargeable.

(l) Buildings and Improvements

Buildings and improvements should be kept distinct from sites and grounds, for taxes may be at a different rate, and very different factors of appreciation and depreciation are likely to affect values; this account should include the cost to the institution (or the presumable value if donated) of its real property in excess of the native value of the grounds, but should not be written up or increased in value merely because the assessed or market value has appreciated. Since the balance sheet for an institution is less an indication of solvency than of what the institution can show for the value entrusted to it, cost rather than market value is the figure of real significance.

(m) Sites and Grounds

Sites and grounds, similarly, should be shown at cost; if anyone wishes to know how far it is true that the institution has property of enhanced value, he may at any time learn the value of the sites and grounds irrespective of any debit to the account representing them on the books; but an effort to make the books show such a value would mean either the confusion of constant changes or else a misleading figure.

Varying Purposes of Asset Statements

It should be noted that three distinct purposes of stating assets are likely to be at one time or another in the mind of the accountant, and the purpose must determine the form of the statement. Ordinarily the assets are those of a "going concern," and the record of property should show the cost of that property to the institution—for only accountability for the funds used need be considered on the books. Occasionally, however, the institution needs to borrow money, with the property as security; since here the important thing is not the cost, but the probable realizability of the particular property, the statement should put the valuation at a reasonable sale price. Finally, absolute sale of the property as a whole may be contemplated; here the value of the property in use is the criterion. Truth lies in the proper relation of any fact to other facts, and usually cannot lie in a bald statement of any fact by itself. For this reason three statements of assets for an institution at any time may all be true, though the figures vary widely. For ordinary purposes, however, the true statement is that of cost, and this is what is recommended on books and balance sheets.

Summarized List of Capital Accounts

CAPITAL ACCOUNTS FOR INSTITUTION PROPERTY

(1) Administrative Equipment

Includes office equipment, such as desks, calculating machines, typewriters, telephone switchboards (if owned), etc.

(2) Apparatus and Instruments

For medical and surgical uses only. Since the Pathological Laboratory and the Home Nursing Department are likely to have comparatively inexpensive equipment of this type, the

amount for them may well be included here. If their equipments are expensive, they should have separate accounts.

(3) Dispensary Equipment

(4) Emergency Equipment

This should be kept separate only if the work is done in distinct quarters with distinct apparatus. Otherwise these items are included in Apparatus and Instruments.

(5) X-Ray Equipment

(6) Ambulance Equipment

(7) Training School Equipment

(8) Steward's Equipment

Storage refrigerators, scales, trucks, etc.

(9) Kitchen Equipment

This should include cost of ranges, steam tables, boilers (for cooking), ice-chipping machines, potato parers, kitchen utensils, etc.

(10) Household Equipment

This should include equipment used for dormitory and table purposes and for general purposes of cleanliness—such as linen, beds, bedding, crockery, dormitory and dining-room furniture, vacuum cleaners, etc. It is likely to be worth while to subdivide and show dormitory, dining-room, and general equipment separately.

(11) Laundry Equipment

(12) Machinery and Tools

This should include machinery and tools for general purposes, as boilers, engines, motors, ventilating fans, and mechanics' tools.

(13) Buildings and Improvements

This is kept less as an indication of valuation than as an indication of the cost to the institution of

its property in excess of the native value of the ground. Hence it should be debited for the cost of the "improvements," commonly so-called, including plumbing and steam-fitting.

(14) Sites and Grounds

This should register the cost of the land alone.

Arrangement of Balance Sheet for Comparative Purposes

The balance sheet should make provision for an easy comparison between the present situation and that of a year ago. If the figures for the last year are placed at the left of such a sheet, with a column for increase and one for decrease immediately following, and then the present figures are placed at the right of the titles of accounts or groups of accounts, the reader will see as the most conspicuous figure on the sheet the present situation, but will find at hand an easy correlation of the present figures with the old.

Arrangement of Balance Sheet as to Assets

The assets should be divided into several groups. The institutional property should comprise the first group, and should be shown in more or less detail, at least in enough detail to indicate the different types of property owned, such as sites and grounds, buildings, furniture and fixtures, machinery and tools, etc. The second group should include investments, which, in the case of many institutions, would comprise the endowment. The sum of these two groups—that is, properties and investments—would constitute the capital assets (unless there were certain cash funds destined, perhaps, because of restrictions, for capital use). The next main group of assets would be the so-called current assets, comprising any accounts receivable, supplies on hand, current cash, and accrued or prepaid items.

Arrangement of Balance Sheet as to Liabilities

A similar division should be made for the liabilities. The first capital liability for a corporation having shares would be capital stock. For an endowed institution it would be proprietorship, or book value of property above debts and special funds. Then would follow special funds, bonds and mortgages payable, etc. The current liabilities would be of the ordinary type, such as bills payable, accounts payable, and accrued items.

These things are shown, without figures, on the sample sheet following (pages 28 and 29).

Schedule of Furniture and Fixtures

The supporting schedules for details should follow. The first, schedule I, is a list of equipment under the head of furniture and fixtures, as shown (the form varying with the circumstances) on page 30.

These figures should be obtained chiefly by inventory, though some items, like calculating machines and refrigerators, would be valued by an allowance for depreciation subtracted from their original cost or from their last book value. The general treatment of depreciation is discussed on page 104, and on pages 170 to 174.

Schedule of Investments

It is usually desirable for an institution to report annually all property owned by it for investment purposes. This form is intended to give information regarding not only the principal (the book value) of such property, but its market value, the gross income which it produces, any allowances or expenses connected with its ownership, and its final net income. The bookkeeper should clearly understand that any charges for taxes, insurance, depreciation, etc., on property held as investment, should be entered not

FORM A BALANCE

Last Year	In-crease	De-crease		This Year
			CAPITAL ASSETS	
			Hospital Properties, etc.	
			Sites and Grounds (O)*	
			Buildings (B)	
			Furn. & Fixt. (ATSKRFH)	
			(See Schedule I, p. —)	
			Machinery & Tools (LQ)	
			Apparatus & Instruments (IDEXP)	
			Ambulances, Horses (M)	
			Miscellaneous	
			Total	
			Investments (Schedule II, p. —)	
			Bonds	
			Stocks	
			Mortgages Receivable	
			Other Investments	
			Total	
			Cash in Capital Funds†	
			Total capital assets	
			CURRENT ASSETS	
			Bills Receivable	
			Accts. Receivable (Treas.)	
			Accts. Receivable (Supt.)	
			General material on hand (U)	
			Cash—current (Treas.)	
			Cash—current (Supt.)	
			Interest (net accrued)	
			Insurance prepaid	
			Other prepaid items	
			Miscellaneous	
			Total current assets	
			Grand Total	
			Deficit	

* The initials after the names of the capital asset items are the symbols of the various accounts representing the property. For example, Furniture and Fixtures should include the equipment of the following divisions: Administration, Training School, Steward's, Kitchen, Housekeeping. The symbols are explained

SHEET

Last Year	In-crease	De-crease		This Year
			CAPITAL LIABILITIES	
			Capital Account (Proprietorship of property not assigned to special funds)	
			Special Funds (See Schedule III, page —)	
			Bonds Outstanding	
			Mortgages Payable	
			Total capital liabilities	
			CURRENT LIABILITIES	
			Bills Payable	
			Accounts Payable	
			Advances by patients	
			Interest (net accrued)	
			Other accrued items	
			Miscellaneous	
			Total current liabilities	
			Grand Total	
			Surplus	

SCHEDULE I

Furniture and Fixtures

		Group Total
Administrative		
Office Furniture (desks, tables, etc.)		
Office Devices (typewriters, calculating machines, etc.)		
Telephone Apparatus		
Training School		
Furniture		
Library		
Charts, models, etc.		
Stores		
Refrigerators		
Trucks, scales, measures, etc.		
Kitchen		
Ranges, boilers, steam tables, etc.		
Machines (ice-chipping, potato-paring, etc.)		
Utensils		
Housekeeping		
Dormitory Equipment (tables, chairs, beds, bedding, linen, crockery, etc.)		
Table Equipment (tables, chairs, linen, crockery, etc.)		
General Equipment (furniture for general use, appliances for cleaning, vacuum cleaners, etc.)		
Grand Total		

as operating expenses of the institution, but as charges against the income of the particular property held. For this reason it is desirable to maintain in the general ledger (or in a subordinate investment ledger) a separate account for the income and for the expenses of each piece of invested property. Then complete record is at hand and statistics may be compiled. As is indicated in connection with the

bonds appearing on the form shown, any bonds at a premium must be amortized whenever interest payments are received, in order that their book value may be reduced to par at maturity. Any bonds at a discount, unless it is believed that they will not produce par at maturity, should be similarly accumulated, and a sum should be added to their book value sufficient to bring them to par at maturity.

SCHEDULE II

Investments

Property	Book Value	Market Value	Gross Income	Allowances	Net Income
Stocks					
Park Bank	$9,000	$13,500	$710		$710
A. B. R. R.	1,000*	1,100	15		15*
Bonds					
H. & F. Ry.	12,543	13,250	600	$55[1]	545
etc.	etc.	etc.	etc.		etc.
Mortgages					
etc.	etc.	etc.	etc.		etc.
Real Estate					
House, 16 Bee St.	15,000		1,500	500[2]	1,000
Totals	$62,200	$64,550	$4,815	$1,300	$3,515
Less short-term holdings	1,000	1,100	15		15
Full-term holdings	$61,200	$63,450	$4,800	$1,300	$3,500

Average percentage of net income $\frac{3,500}{61,200} = 5.72\%$.

* Held for less than a year.

Schedule of Special Funds

The schedule of special funds is intended to give a summary statement of the condition of each fund in such a way

[1] Amortization of premium on bonds.
[2] Taxes, insurance, depreciation, etc.

SCHEDULE III

Statement of Condition of Special Funds

Last Year Total Fund	Increase	Decrease		This Year in Use	Uninvested Bal.	Uninvested Bal. Group Total	Total Fund	Group Total
			Restricted hospital-property funds					
$25,000	$1,000		Holmes Fund	$25,500	$500		$26,000	
10,000	300		Bell Fund	10,300			10,300	
$35,000	$1,300		Total	$35,800		$500		$36,300
			Restricted investment funds					
$5,000		$200	Davis Fund	$4,500	$300		$4,800	
$5,000		$200	Total	$4,500		300		4,800
			Unrestricted investment funds					
$7,000			Putnam Fund	$7,000			$7,000	
$7,000			Total	$7,000				7,000
$47,000	$1,300	$200	Total capital funds	$47,300	$800	$800	$48,100	$48,100
			Restricted current-expense funds		$7,550			
			Unrestricted current-expense funds		2,300			
			Unrestricted general-purpose funds		150			
			Total current funds		$10,000			

that all persons interested in the fund, as donors or trustees, may learn exactly what has been done with it for the year in question. As in the balance sheet, the comparison with the preceding year is preferably placed at the left of the statement, and the items pertaining to the immediate year at the right. Since many even of the capital funds will have an occasional unexpended balance, that balance should be reported in a column by itself, and preferably the amount of the fund invested (of which, therefore, the income has been received) should also show separately. This gives for each fund three possible figures for the year in question, namely: the amount from which income was received, the unexpended balance, and the total of the fund. The statement should also show the totals for each group of funds—for instance, the total of the funds restricted to the purchase of hospital property, of the funds restricted to investment, of the unrestricted funds, etc. The total of all the groups will then give the total capital funds. To these are appended the current funds specified, classified on the basis of any restrictions that may be placed upon them.

The figure in the last column is susceptible of proof in three ways: it should equal the last-year total plus the increase minus the decrease; it should equal the amount this year in use plus the uninvested balance; it should equal the total of the individual funds of the preceding column.

Designation of Accounts by Symbols

It is usually found very convenient, if not absolutely necessary, to have symbols representing the various accounts, for then memoranda indicating accounts to be debited or credited may be easily made on various forms and documents. The choice of symbols should be carefully made, or errors will arise from carelessness or confusion. Letters, having mnemonic significance, are preferable to

figures. Those recommended for the property accounts of a hospital are shown below. Throughout this book much emphasis is laid upon the symbols used—not because the symbol itself is of consequence, but because classification of accounts is of utmost importance, and here the symbolism is the expression of the classification. A knowledge of the symbol of an account under this plan instantly and automatically shows its place in the general accounting scheme.

Symbols for Property Accounts

A single capital letter may be used to indicate a property account, and the letter will always suggest the account to one who has once realized the connection between the symbol and the name of the account. In a few cases the correspondence is not so obvious as might be desired, but in these cases the natural symbol is required for use in another connection where it is likely to be in much more frequent demand, and hence the advantage of the mnemonic aid in that connection will be greater than here. Or, if deemed simpler, to show the relation of the property symbol to the department symbol, a symbol may be prefixed to the departmental symbol. Since it is usually unnecessary to distinguish between property, plant, and equipment, we may take E (equipment) as the general symbol of a capital account. If the institution is one which maintains a large number of departments, symbols for the capital accounts may well be related in all cases to the corresponding symbols for expense accounts, for example, by the prefix E; for not enough single letters are available. Symbols by both methods are shown below. In the right column are given those related more closely to the expense symbols. (Their significance will be seen only after the expense symbols have been observed—as explained on page 66.)

Where departments are few, the single letter should be used.

Short symbol		*Combination symbol*
A	Administrative Equipment	EA
B	Buildings and Improvements	EB
D	Dispensary Equipment	EPD
E	Emergency Equipment	EPE
F	Dining Equipment (F suggests feeding, as D is already in use)	EDHT
H	Household Equipment (general, for dining and dormitory are separately shown)	EDHZ
I	Apparatus and Instruments (I suggests instruments, as A is already in use)	EPM
K	Kitchen Equipment	EDK
L	Laundry Equipment	EDL
M	Ambulance Equipment (M suggests a*m*bulance, as A is already in use)	EDM
N	Home Nursing Equipment	EPH
O	Sites and Grounds (O suggests outside, as S and G are needed elsewhere)	EO
P	Pathological Laboratory Equipment	EDP
Q	Machinery and Tools (Q suggests e*q*uipment, as M and T are needed elsewhere)	EHQ
R	Dormitory Equipment (R suggests rooms, as D is already in use)	EDHD
S	Steward's Equipment	EDS
T	Training School Equipment	EDT
U	Inventories of Material (U suggests a basket, for stores)	EU
X	X-Ray Equipment	EPX

Basis of Treatment of Accounts Herein

In order to avoid confusion, as already suggested, the treatment of accounts in any paragraph in this book is based in large part on the sort of institution with which

the paragraph is primarily concerned; since, however, the chief type of institution chosen for illustration is the hospital, in the paragraphs on hospital accounts are discussed all accounts having general application to all institutions, as well as those peculiar to hospitals. Such are accounts for the steward's department, the kitchen department, the housekeeping department. Other accounts of occasional use in hospitals, but of more frequent use elsewhere, are treated in other paragraphs which chance to be devoted primarily to the accounts of other institutions (for example, baths, in the paragraphs devoted to accounts for clubs). Similarly, educational institutions may need accounts primarily designed for clubs (as the accounts for tennis-court equipment and maintenance). For other institutions than hospitals, therefore, many accounts similar to those already discussed for hospitals, or even identical, are likely to be required; and a few accounts desirable for hospitals, but not mentioned above, may also be worth while. Only in the index is attempt made to bring together, for all, or any, types of institutions, all references to the recommended accounts. The arrangement of the text is that which is believed to bring out most clearly the principles. An attempt to discuss in a connected passage all accounts for each type of institution would mean an enormous amount of repetition. The hospital is taken here as the standard type, and variations from it are discussed by themselves.

Capital Accounts for Educational Institutions

Universities, colleges, and schools will require accounts not even suggested in the discussion of hospital accounts. Such are accounts representing different types of instruction and facilities for study both for students and for instructors. Below is a list of capital accounts recommended

(the list is not necessarily complete, but indicates the kind of differentiation to be made). The symbol recommended for each is shown.

The significance of the general symbols is as follows:

E Property, plant, and equipment (an initial E, then, always indicates a capital account, and the term equipment is used indifferently for property, plant, and equipment)
P Professional research
S Students' instruction

The symbols for subdivision are in the main obvious, but a few which must be somewhat arbitrary (because the letters naturally to be applied are already in use elsewhere) are as follows:

B Books (for libraries)
G Ground (for students on the ground or in residence)

The following is the list of capital accounts:

ESG Equipment for oral instruction to students in residence
ESE Equipment for instruction through university extension
ESC Equipment for instruction by correspondence
ESL Equipment of laboratories devoted to the use of students (including libraries and collections in connection therewith, but not those for general use)
EPL Equipment of laboratories for research work by the members of the teaching staff (or by special investigators)
ESB Libraries for the general student body (not in connection with laboratories, and not especially for research by members of the teaching staff or by special investigators)

It may be worth while to subdivide this account as follows:

ESBB Books (not including periodicals or musical scores)
ESBU Pamphlets
ESBP Periodicals, bound and unbound, other than newspapers
ESBN Newspapers, bound and unbound
ESBG Maps and charts
ESBM Musical scores, rolls, and records
ESBA Photographs, lantern slides, prints, etc.
ESBQ General equipment, for storage, administrative, and delivery purposes

The amount entered to the library accounts should be in all cases, except equipment, the cost of what is added. Replacement and rebinding of books lost or worn is not a capital charge, but a running expense, whereas additions, so long as they are available for use, are what the library has to show for its funds. Depreciation and appreciation are beyond anyone's power to estimate in any important library, and may be disregarded. Libraries for which no capital accounts have been kept in the past may be roughly represented on the books on the basis of a fair average estimated cost per volume —not for the purpose of valuing the present library (for such a figure might be an absurdity), but in order that there may be a point of departure, so to speak, for watching its future progress. Gifts should be appraised, and the value should be entered to the capital account and credited to an account for Library Gifts.

EPB Libraries for the use of the teaching staff or of special investigators engaged in research
ESM Museums and other permanent exhibitions (not in connection with laboratories)

ESO Equipment of observatories used by students

EPO Equipment of observatories for research by members of the teaching staff or by special investigators. It might be worth while to subdivide this account as follows:

- EPOA Astronomical apparatus
- EPOP Photographic apparatus
- EPOB Books, maps, charts, etc.
- EPOQ General equipment

EHH Equipment in public halls (pianos, organs, scenery, etc.). The first H of the symbol indicates general "house property."

So far as universities, colleges, and schools afford to their residents facilities similar to those afforded by clubs, hotels, etc., to the accounts above named will be added certain departmental accounts indicated below.

Equipment Accounts for Hotels and Clubs

Hotels and clubs would have to a certain extent the same accounts as hospitals and educational institutions. For example, EDS, steward's equipment, and EDK, kitchen equipment, would be the same. A library, however, would be designated EDB (since D indicates a department of activity, and only one type will be maintained), rather than ESB or EPB, and an exhibition EDM. In addition, the accounts indicated below are likely to be necessary.

The departmental symbols shown for this group of accounts are usually suggestive of the initial letters of the departments. The following, however, are more or less arbitrary; but they are in each case made necessary by some other use of the symbol which would naturally be used in this connection, and each suggests a word connected with the department function.

A Boats (suggesting aquatics)
F Carting (suggesting freight)
I Gymnasium (suggesting, by its shape, straightness and setting-up exercises)
J Driving (suggesting Jehu)
O Bowling (by its shape suggesting a ball)
Q Cards (suggesting queen)
R Billiards (suggesting rubber and cushions)
V Golf (suggesting, by its shape, an inverted tee)
W Baths (suggesting water)
Y Bar (suggesting the shape of a wine glass)

The following, then, is a list, with symbols, of equipment accounts recommended for hotels and clubs:

EDA Equipment for the department of boats (This should include the cost of boat-houses, boats, canoes, launches, etc.)
EDC Equipment for the department of cigars
EDE Equipment for entertainments (properties, etc.)
EDF Equipment for the department of transportation (including cost of draught horses, wagons, harnesses, etc., for cartage and delivery)
EDG Equipment for the department of garage (including cost of automobiles and all equipment connected with their use)
EDI Equipment of gymnasium
EDJ Equipment of stable (including the cost of horses, horse-drawn vehicles, harnesses, blankets, etc., for driving or livery purposes, but not including the cost of such equipment for cartage or delivery)
EDN Equipment for the department of news-stands
EDO Equipment of bowling alleys
EDQ Equipment of card rooms
EDR Equipment of billiard rooms
EDT Equipment for the department of tennis (This should include the cost of alterations of land which serve the purpose of tennis alone and do not add to the value of

the land for general use. The cost of special equipment, such as nets—center, side and back—should be entered here. No institution is likely to need this symbol for both a tennis department and for a training school for nurses. Hospitals maintaining courts for doctors and nurses would hardly find a separate account worth while. Sanatoria, if they had a training school for nurses, might use symbol EDX for tennis.)

EDV Equipment for the department of golf (the cost of tees, putting greens, artificial hazards, shelters, etc., and all equipment or improvements on the land which serve golf purposes and would not increase the value of the land for general use. Grading and the cultivation of fair greens may be deemed an addition to the general value of real estate.)

EDW Equipment for the department of baths (This includes the cost of all the equipment for swimming pools, Turkish baths, vapor baths, electric or violet-ray baths, and other therapeutic baths. This account should be kept in hospitals maintaining such a department.)

EDY Equipment for the bar

In many institutions, having but few departments, these symbols could be shortened to a single letter. In every case above, the E is retained to show that the account is for capital items, and the D is retained to show that it represents capital for a department—as distinguished from property or capital independent of departmental use. For example, EA is administrative equipment, but EDA is aquatic equipment; EO is sites and grounds, but EDO is bowling equipment. The titles of accounts given above are often long and awkward in order to suggest the significance (as a mnemonic aid) of the symbol. In use, their shortening is obvious.

Balance Sheet for Institutions Generally

The balance sheet for educational or other institutions would not be essentially different in form from that shown on page 28. The grouping of property accounts would be somewhat different, however. The costs of equipment for purposes of instruction, for example, would preferably form one group. Similarly, for clubs and hotels, the costs of equipment for outdoor or athletic purposes would form a group by itself.

CHAPTER III

THE STATEMENT OF FINANCIAL TRANSACTIONS FOR THE YEAR

The statement which is of most importance in giving a summary view of the transactions of any business organization for any particular period is the statement of income. For institutions which are not primarily profit-making, however, the common type of income statement is not likely to be quite satisfactory. A complete statement of transactions should combine capital and revenue items, but should do this without confusing them. Several related schedules may well supersede the single statement of income. It is obvious that institutions having several sources of income and compelled to meet several kinds of expense should show how far any of the kinds of income are adequate to take care of the expense connected with them.

Earnings and Endowments

In a hospital, for example, the first fact we wish to know is how far the earnings from the service of patients are adequate to pay running expenses. If we show all items connected with the care of patients in a schedule by themselves, which we may call the "schedule of earnings," the resulting surplus or deficit gives us the desired figure.

We next wish to know how far the income from the endowment of the institution is adequate to make up any deficit in its direct earnings, or how far it will add to the surplus of earnings. So the surplus or deficit of earnings,

from the first schedule, should be carried down to the second schedule—which we may call the "schedule of endowment income." Any surplus or deficit remaining after income from endowment has been considered is the net result of the internal affairs of the hospital.

Subscriptions

For most hospitals, two other sources of income remain —annual subscriptions from charitable organizations and individuals, and legacies. It happens that subscriptions are likely to maintain a fairly steady level, and may with some degree of certainty be counted upon by the administrative officers to meet running expenses. Legacies, on the other hand, are extremely variable, and may run very high in seasons of abnormal death rate among the well-to-do, and may run very low even in extremely prosperous seasons if these seasons happen to be seasons of good health. For this reason it seems desirable to make a distinction between these two kinds of income, and to provide separate schedules for them. If we bring down the surplus or deficit from our second schedule, or "endowment income," into a third schedule, which we may call "normal current income," we have a final surplus or deficit resulting from what may be considered the normal transactions of the period under review.

Legacies and Other Funds

This figure, in turn, should be carried into the fourth schedule, which should cover legacies. Here we enter a field which may be either capital or revenue. This schedule will show the final result for the year as affected not only by normal income and expense, but by the two transitory and unreliable elements, current and capital legacies. If any legacies have been received subject to the restriction

that they shall be used for capital purposes only, it is hardly feasible to consider them as of the same class with unrestricted legacies, and theoretically they should not go into a schedule which includes current items; but since most persons who are interested to watch contributions to an institution of this sort are not familiar with accounts, and are therefore likely to expect to see even capital legacies placed with the income for the year, it is desirable to place them in this part of the statement—though they should be designated separately. This fourth schedule, since it is not strictly for either income or capital, but combines all kinds of ultimate receipts, should distinguish by separate columns those for current use from those for capital use.

Detailed Schedules

To these schedules may be appended details for purposes of comparison—one institution with another or one year with another; but anyone who has attempted to make comparisons for himself either within an institution or between institutions will recognize the importance of the summary statements, even though details be not shown.

Detailed Examination of Schedules

Let us now examine these statements in detail. The forms given, on pages 51–54, are for a hospital. Provision is made there for virtually all contingencies. Never could all of them arise at the same time in any institution, but the titles are shown for the sake of completeness. Virtually the same sort of items would appear for any other type of institution, though the titles might be changed in certain cases—as with "State appropriation" substituted for "Subscriptions from normal sources."

Schedule A—Earnings

In schedule A are shown only those items of earning and of expense which result from the conduct of the institution's prime function—the care of patients. (For a school or college this would be the education of students, and for a club or hotel the entertainment of guests.) Distinction should be made clearly between earnings and income, for the latter term is commonly used to designate not only earnings from the chief business of the enterprise, but also interest and dividends on bonds and stocks held and miscellaneous income from chance profits. Any gain arising from sources not directly related to the year under consideration should appear on neither the earnings account nor the income account, but on the fourth schedule. Depreciation must be counted as an expense of conducting business, and is therefore chargeable against earnings on this first schedule. In view of the fact that very different policies with regard to the amount of depreciation chargeable in any year prevail in different establishments, however, it is desirable to show depreciation as a separate item; for it would be unfortunate for any institution to have its superintendent judged by the total charge for expenses, when that charge included very liberal provisions for depreciation, in comparison with the superintendent of another institution in which the provision for depreciation is very scant. For these reasons, on the revenue account depreciation is shown in the accompanying form as a deduction from an initial surplus or deficit, and is therefore excluded from the first figure of expenses. Obviously if the revenue from the main activity of the institution is in excess of all the expenses, the words "Total deficit" on the form which follows will be canceled, and "Net surplus" will stand as the title; and if the initial surplus is less than the amount of the depreciation, the final designation of the amount of schedule A will be "Net deficit."

Schedule B—Endowment Income

The purpose of schedule B is to show not merely the figures for income, but also the rate of return. In view of the fact that some investments may have been made in the progress of the year, and therefore have borne interest for less than a year, one cannot draw exact conclusions with regard to the average rate of return unless one knows how much investment has borne interest for a short period. Schedule B accordingly shows as its first item the investment previously reported and unchanged, and gives in parentheses the average rate. The next item is the interest charged by the corporation, and therefore earned by the corporation, on property used in the departments and shown on the statement of detailed operating costs under the various departments. The income from new and changed investments, which, of course, is for less than a year, is separately shown. From the total of this income from investments and property must be subtracted any deficit of earnings as shown by schedule A, if any has occurred; or to these will be added any surplus of earnings. The cancellation of the unnecessary words on the schedule makes the final figure clear.

Schedule C—Normal Current Income

Schedule C is likely to be most useful if it covers not only all items of gain from earnings and from investments, but also all sums received from outside in the way of gifts or legacies applied to current uses and normal in amount. Since the purpose of schedule C is to show the ultimate result of the year's work so far as the balance of income and expense is concerned, and since many institutions receive frequent legacies not only available for current expenditure but even intended by the donors to apply to that use, the result of the year's operations is not fairly shown unless the amount of such gifts and legacies actually utilized for cur-

rent purposes is shown on the final schedule of normal current income and expenditure. The final figure of schedule C indicates whether the institution is running behind on all its normal current income, from whatever source, or is accumulating a fund available either for expansion or for increased investment. Institutions, unlike most commercial and manufacturing enterprises, are likely to have funds which may be treated as either capital or current; for they are not primarily engaged in making and distributing profit; and hence they have not the same need of distributing evenly throughout the years any unlabeled items of income and capital. Since expenses need not necessarily be met out of earnings, and since some contributions may be either income or capital, a certain overlapping of what in ordinary business would be deemed either pure income or pure capital is bound to occur. This overlapping should be indicated so that one in reading the accounts, or at least in reading the final published statement, may see both what is the gross increase in the capital of the enterprise, and how much of those receipts which under certain conditions might have been added to capital have been actually absorbed for current use. The balance sheet, as previously indicated, shows annually the condition of all capital funds; but it cannot show how much property possibly available to add to capital has been absorbed for other purposes. Schedule C should show the actual absorption of legacies for current uses. Corporation expenses should be reported here.

Schedule D—Special Items: (a) Available Funds

Schedule D is meant to be a statement of the financial transactions for the year, both capital and income. It begins with the balance brought down from schedule C. If schedule C has not produced either a mere cancellation of receipts and expenditures on one hand or a deficit on the

other, the surplus of normal current income is, of course, available to increase capital, and therefore it may be held either for current use in the subsequent year or as a fund laid aside and destined for capital investment. The schedule shown below indicates how much surplus of normal current income is destined for each of these two possible uses. The second and third columns of the schedule are intended to separate the current from the capital items; and therefore these amounts, resulting from a division of the surplus of normal current income just indicated, are not only shown, with their total, in the first column, but are extended into the appropriate other columns. As above indicated, legacies and other special contributions may be restricted to investment for capital endowment, they may be available for the purchase of property, or they may be available for current expenses. The sum of these constitutes the amount which it is possible to add to capital; but if any part of this sum is applied to current expenses, the balance only will be extended into the capital column of the schedule, and the sum deflected to current expense will appear in the current column and will correspond with the sum so named on schedule C.

Occasionally an institution disposes of some of its property at a profit. This gain is clearly not a gain of income in the ordinary sense, because it does not arise from circumstances of the current year. It should be considered a capital addition, although, of course, unless there were a restriction on the original property, it may be applied to current uses if need arises. Similarly, gains may arise from change of investment. These, when added to the possible capital additions already indicated, show all possible additions to capital for the year. It is likely to happen, however, that some capital items have depreciated, and that, although sums are available for capital increase, it is wise

to devote them to making good capital losses. Wherever this has occurred, it is obvious that the increase in property or investment shown by the balance sheet will not be so great as the increase in possible additions to capital shown on schedule D. To explain any such discrepancy, it is desirable that those sums necessary to make good losses shall be shown directly on schedule D, and thus indicate the deduction from items of possible addition to capital. It is true likewise, of course, that capital property may have increased because the institution has borrowed to make purchases. If that has occurred, the increase in outstanding debt should appear on schedule D as a means of showing the total amount of funds to be accounted for. Then any changes on the balance sheet will be explained by reference to schedule D—unless those balance-sheet changes have arisen from a mere shift of one kind of assets for another, or from a shift of one kind of liability for another.

Schedule D—Special Items: (b) Disposition of Funds

The second half of schedule D is intended to show how the institution has accounted for the funds which the first half of schedule D shows it responsible for. If the normal current income (schedule C) has shown a deficit, obviously a part of the funds available for current use and shown on the upper half of schedule D will be absorbed in making good this deficit. Any additions to institution property and to institution investment will also absorb certain portions of the increase of funds available for capital use; and if any shrinkages of either property or investment are to be made up from capital funds these will also show. It will be noticed that those sums necessary to make good losses are shown on both halves of schedule D; since it is desirable to show the details regarding the use made of capital funds available, they must appear on one side of the schedule, and

FORM B

Statement of Financial Transactions for the Year

Schedule A—Earnings

Expenses, excluding depreciation (see Schedule IV, page —)	$245,000
Revenue from hospital sources (see Schedule V, page —)	100,000
Initial [surplus] deficit	$145,000
Depreciation (see Schedule IV, page —)	5,000
Total [Net] [surplus] deficit of earnings (see Schedule VI, page —)	$150,000

Schedule B—Endowment Income

Income from investments previously reported, and unchanged (5.12%)*	$85,000
Interest charged to institution departments on their equipment (3%)†	10,000
Income from new or changed investments (parts of year only)	5,000
Total	$100,000
[Surplus] Required to make good deficit of earnings (Schedule A).	150,000
[Total surplus] Net deficit of endowment income	$50,000

Schedule C—Normal Current Income

Subscriptions from normal sources (see Schedule VII, page —)	$80,000
Legacies and special donations used for current expenses	00,000
Total	$80,000
[Surplus] Required to make good deficit of endowment income (Schedule B)	50,000
Balance	$30,000
Corporation expenses	5,000
Net [Total] surplus [deficit] in normal current income	$25,000

* This does not include income from any funds of which the income is not available for current use.

† The reason for charging interest to departments is given on page 103.

STATEMENT OF FINANCIAL TRANSACTIONS FOR THE YEAR (Continued)

Schedule D—Special Items

Funds to be accounted for		Capital	Current	Total
Surplus of normal current income (Schedule C) disposed as below:				
Added to current funds	$10,000		$10,000	
Destined for capital investment	15,000	$15,000		
Total	$25,000			
Endowment income restricted to increase of capital		00,000		
Legacies and other special contributions received (see Schedule VIII, page —), as follows:				
Restricted to capital endowment	$25,000			
Available for purchase of property	10,000			
Available for current expenses	5,000			
Total bequests possible to add to capital	$40,000			
Less amounts used or destined for current expenses	00,000	40,000		
Gains on sale of institution property		00,000		
Gains on sale of investments		00,000		
Total extraordinary items possible to add to capital		$55,000		
Necessary to make good losses of institution property*	$5,000			
Necessary to make good losses on investments	5,000			
Total to make good losses of capital	$10,000	10,000		
Net increase [or decrease] of capital ownership		$45,000		
Increase of outstanding debt‡		00,000	00,000	
Net funds to be accounted for		$45,000	$10,000	$55,000

Statement of Financial Transactions for the Year (Concluded)

Schedule D—Special Items (Continued)

Disposition of funds to be accounted for		Capital	Current	Total
Deficit of normal current income (Schedule C)			$00,000	
Gross expenditures for institution property	$20,000			
Necessary to offset losses as above †	5,000			
Net additions to institution property	$15,000	$15,000		
Gross expenditures for investments	$25,000			
Necessary to offset losses, as above †	5,000			
Net additions to investments	$20,000	20,000		
Total capital additions invested		$35,000		
Uninvested capital additions, cash with treasurer §		10,000		
Total capital additions		$45,000		
Decrease of outstanding debt ‡		00,000	00,000	
Current cash with treasurer §			10,000	
Total funds accounted for		$45,000	$10,000	$55,000

* Includes extraordinary depreciation, such as loss by fire, or loss on sales of real estate.

† Unless these items are shown, a comparison of the balance sheets of two years will imply an apparent disagreement with this schedule, for the balance sheet will show only net additions; and if these items are to appear on one half of this schedule they must appear on the other. Hence the repetition.

‡ To be added if any.

§ These are not necessarily the treasurer's present cash balances, for he may have had a balance from a previous period, may have received other sums from the collection of debts or sale of property, and may have made disbursements for debt or for the investment of previous balances. These will show on the next statement.

unless they appear also on the other side the schedule will show a discrepancy between the sums to be accounted for and the disposition of such sums. Any sums destined for capital use, but not yet invested, will appear as a balance, in the capital column, as cash with the treasurer. Any sums spent in paying off outstanding debt will appear also in the capital column, for they explain the disposition of capital sums available, and paying debt is the same as making investment. Any sums destined for current use and yet unexpended appear in the current column as increase of current cash with the treasurer.

FORM C

SUMMARY OF FINANCIAL TRANSACTIONS FOR THE YEAR

Surplus of normal current income	$25,000	
Legacies and other special contributions	40,000	
Net additions to outstanding debt		
Net shrinkage in total capital in institution property		
Net shrinkage in total capital investments		
Net shrinkage in uninvested capital funds		
Net shrinkage in available current funds *		
To be accounted for		$65,000
Deficit in normal current income		
Expended in making good losses of capital	$10,000	
Net shrinkage in outstanding debt		
Net additions to capital in institution property	15,000	
Net additions to capital investments	20,000	
Net additions to uninvested capital funds	10,000	
Net additions to available current funds †	10,000	
Accountability satisfied		$65,000

* This may have a negative origin; that is, it may be due to a larger deficit on the balance sheet than that of a year ago.

† This may have a negative origin; that is, it may be due to a smaller deficit on the balance sheet than that of a year ago.

Summary of Financial Transactions

A summary of the financial transactions for the year should show the total changes in each group of property, investments, and liability, without indicating the details. In form, it should show a list of sums to be accounted for, and a list of items which serve that accountability. The two must balance, as shown on page 54. The first three items on the first half of the sheet show direct receipts, and therefore must be explained in the second half. The other four items show either consumption of property, through operations, or exchange of property: consumption through operations shows in either a reduced surplus of normal current income, or an increased deficit; and exchange of property must show in one of the last six items of the second half of the sheet. In a similar way, any item on the second half of the sheet is explainable by some item or group of items on the first half. So the statement necessarily balances and summarizes the situation for the year.

Detailed Statement of Expenses

Schedule IV, the statement of expenses for the institution, is shown in Chapter VII. Its construction is the chief bookkeeping task of the institution, and therefore it may well have treatment by itself.

Detailed Statement of Earnings

It is important that not only expenses but income shall be subdivided so as to show the result of operations for each type of service. In order that this may be done, numerous revenue accounts should be established. Schedule V provides for the statement of such income accounts in the form recommended for an annual report. The figure for the present year is shown at the right, in a column standing out distinctly by itself, and the figures for last

SCHEDULE V

Revenue from Institution Sources

Last Year	In-crease	De-crease		Symbol	This Year
			Board of patients in private rooms	IRBP	
			Board of patients in wards	IRBW	
			Special physicians' fees earned	IPSD	
			Special nurses' fees earned	IPSN	
			Special orderlies' fees earned	IPSO	
			Special laundry charges earned	IDL	
			Profit on medical and surgical supplies sold	IPM	
			Dispensary fees received	IPD	
			Emergency fees received	IPE	
			Home nursing fees received	IPH	
			X-ray service fees earned	IPX	
			Ambulance fees earned	IDM	
			Pathological laboratory fees earned	IDP	
			Miscellaneous earnings	IZ	
			Total earnings		

year, with the increase or decrease shown by the present year, are at the left. Care should be taken that no income from these sources be credited to expense accounts, for in that case both expense and income will be misrepresented. Sums given to the institution by outside organizations should not, on the other hand, be credited to these income accounts, for such credit confuses the earnings of the institution, from work performed, with benefactions granted to it. Such contributions should be credited to the contribution account, and in no way affect the statement of earnings. If, on the other hand, contribution is made to pay for specific service rendered to an individual, as for service rendered to a patient who otherwise would be carried as a

free patient, such amount should be credited to income, because it is not a general gift, but is either for the benefit of the individual or is payment for a specific public service rendered. Since the purpose of accounting is to distinguish not only the cost of various kinds of outgo, but the yield of various sources of income, to confuse on the books a payment made for a specific service rendered to an individual and a general contribution for the operation of the institution as a whole is to misrepresent the relation of earnings to supporting contributions. The schedule is on page 56.

The symbols, in each case except that for miscellaneous earnings, are merely the I prefixed to the symbol for the expense account of the department. This suggests that the income is a return from the expenditure. The same sort of application of a symbol for income would be made in institutions other than hospitals. The form of schedule would be similar.

Detailed Statement of Departmental Earnings and Expenses

For any institution in which effort is made to charge fees that shall make any departments self-supporting, and

SCHEDULE VI

Comparison of Departmental Income and Expense

	Earnings	Expenses	Gain	Loss
Dispensary	$2,715.35	$9,310.15		$6,594.80
Ambulance	3,540.60	5,275.10		1,734.50
X-Ray service	1,285.75	1,335.90		50.15
Other departments*	92,458.30	234,078.85		141,620.55
	$100,000.00	$250,000.00		$150,000.00

* In order to make this incomplete schedule agree with the deficit shown on form B, figures for the departments not specified in this schedule VI are added.

especially for those attempting to derive a profit from particular undertakings, income and expense should be brought together in a single statement, somewhat as on page 57.

For an institution like a school this schedule would assume a somewhat different form, because of the overlapping of income groups and expense groups. The following incomplete schedule will suggest the principle.

SCHEDULE VI

Comparison of Divisional Income and Expense

	Symbol	Earnings	Expenses	Gain	Loss
Tuition of students	ISG	$140,000			
Instruction	SG		$170,000		
Libraries	SB		25,000		
Museums	SM		20,000		$75,000
Laboratories	ISL & SL	5,500	5,000	$500	
Correspondence instruction, etc.	ISC & SC	4,000	4,200		200

Record of Departmental Income and Expense

Institutions having a larger number of departments which are primarily intended to be self-supporting should adopt a system by which the comparison of income and expense is not merely reported in ephemeral form, but is recorded on the principal books. It is desirable also to relieve department managers of immediate responsibility for certain charges put upon them by superior authority, such as rent, interest, insurance, taxes, depreciation, and repairs, and to have each month a figure that shows the actual direct operating expense of the department. It is also important to see that debits which are mere offsets to credit items, such as rebates, remitted charges, and corrections of

errors, are not confused on the books with expenses, and that offsets to expense items are not confused with earnings. Care should be taken, finally, to enter credits to a department, except for closing entries, in such form that they shall indicate the volume of business done. Those needs suggest the convenience of three general-ledger accounts for each department, as follows: Income, Expense, General. The purpose of the first two has been already indicated. To the last should be debited all charges incurred under any other authority than that of the department manager, such as distribution of burden charges, interest, depreciation, etc., and to it should be credited any income, if there chances to be any, from other sources than earnings. Finally, to this general account should be closed the other two accounts—Income and Expense. The result is the ultimate surplus or deficit for the department. The keeping of the three accounts preserves for us in permanent form, for immediate or for future reference, these three important annual (or monthly) figures—direct operating expense (for which the manager is responsible), direct operating earnings, final surplus or deficit after all allowances have been made. The figures of the general account are available, of course, for the report comprehended in schedule VI.

Other Income Accounts

Separate accounts should be kept for the various sources of income for the corporation, as follows:

	Symbol
Income from Stocks	ICD
Income from Outside Interest (bonds, mortgages, etc.).	ICIO
Income from Interest on Equipment, Charged to Departments	ICIH
Income from Real Estate	ICR

SCHEDULE VII

Subscriptions from Normal Sources

		Group Totals
From individuals		
A. Bee		
C. Dee		
E. Eff		
etc.		
etc.		
Total		
From charitable organizations		
Hospital Aid Association		
Morgan Foundation		
etc.		
etc.		
Total		
From governmental sources		
Municipal Treasury		
State Treasury		
etc.		
Total		
From churches		
First Church		
Second Church		
etc.		
etc.		
Total		
Grand Total		

	Symbol
Income from Subscriptions, Private	ICGP
Income from Subscriptions, Charitable Organizations	ICGO
Income from Subscriptions, Governmental	ICGG
Income from Churches	ICGC
Income from Miscellaneous Sources	ICZ

(As symbols, C = corporation, D = dividends, I [not initial] = interest, H = home, G = gifts.)

Legacy Accounts

Legacies should be originally credited to accounts representing the particular groups under which they chance to fall. Those belonging to specific funds should be credited to those funds; those added to capital should be credited to

SCHEDULE VIII

Legacies and Other Special Contributions Received

		Group Totals
Restricted and capital endowment		
Loring bequest		
Bell bequest		
etc.		
Total		
Available for purchase of property		
Spaulding bequest		
etc.		
Total		
Available for current expenses		
Suffield bequest		
etc.		
Total		
Grand Total		

Capital Legacies; those available for current use should be credited to Current Legacies. At the end of the year, Capital Legacies should be closed into Capital Account. If current legacies are later converted to capital use, Current Legacies should be debited and Capital Account should be credited; but if used for current purposes, Current Legacies should be closed at the end of the year as an income account, and the balance should be transferred to Normal Current Income.

Subsidiary Ledger

The form of subordinate ledger recommended later for details of expense is likely to prove serviceable for details of income. The general ledger should show group totals, such as Income from Subscriptions (ICG), but it need not show the subdivisions. These may be recorded in the subordinate ledger. The form and use of that ledger are described on page 108. Of course the form would be adapted to this use by the substitution of credit columns for the debit columns shown for the expense ledger.

This form of subordinate ledger might also be used for interest and dividend receipts and for rentals collected—if these items were not too numerous or complicated by too many offsetting charges. Whenever these items are numerous, they should be recorded in a subordinate investment ledger of usual form, and should be represented in the general ledger by controlling accounts of which the balance should agree with the sum of the details of the subordinate ledger accounts.

CHAPTER IV

THE CLASSIFICATION OF EXPENSE ACCOUNTS

Many details of information can be preserved without cumbering the general ledger or making much labor for the bookkeepers. Although about two hundred fifty different accounts are here specified, as illustrations, for the running expenses of a hospital (many of which, however, are not required in small hospitals having few departments), not sixty of these would appear under this plan on the general ledger, and many even of these would not be needed in small institutions.

Subsidiary Expense Ledger

Provision for this large number of detailed accounts without burdening the general ledger is made through a subordinate ledger which contains numerous details for each department, and is the medium through which posting may be made, for a group of such details, to the general ledger. The extreme elaboration of the plan outlined in the following pages is not fatal to its usefulness, therefore, for it is consistent with only a reasonable amount of bookkeeping. It must be judged first independently of the bookkeeping problems raised—to learn whether it is good in itself. If it is found good, question next arises as to whether it is worth while.

Classes of Expense Accounts

These expense accounts are of three fundamental sorts: first, the primary accounts, by which expenditures or debts incurred are charged to the accounts with which they are in the first instance directly concerned—such as salaries of nurses, cost of food, purchase of fuel; second, secondary accounts, to which items originally charged to primary accounts are later transferred in order that they may be gathered together on a different basis, and may on that basis be distributed to the accounts representing the ultimate purpose of the expenditure; third, ultimate accounts showing the summaries of results.

The purpose of these three classes is to serve three sorts of comparison; first, detailed comparisons within the institution, as a check on possible wastefulness or as a gauge of special efficiency—for example, fuel costs, postage expenses, laundry wages; second, comparison of larger groups of costs between institutions operating under different conditions—for example, total cost of nursing where there is a training school and where there is not, and the cost of cooking where employees are boarded and where they are not; third, final comparisons of all costs per principal-resident day for separate classes of principal residents, i. e., patients, students, etc.

Posting to Expense Accounts

In the following description of the expense accounts it should be noted that to some accounts, the secondary and the ultimate accounts, postings will ordinarily be made only monthly or annually, and then only a few postings will need to be made. In practice, therefore, the plan does not involve so much labor as it seems to do.

Basis of Classification

For the expense accounts, as well as for the capital accounts, a hospital will serve as an excellent illustration. On a later page is given a classified list of the accounts recommended, and a statement of the uses of those for which the use is not obvious.* The principle of classification should be understood before this list is examined, however, or the purport of it will probably be misunderstood. As has been already suggested, one classification is concerned with the character of the accounts. In this classification we find: primary accounts, which are chargeable for expenses incurred for one sole purpose—as fuel for heating, postage for the office, and wages for laundry work; secondary accounts, which record expenses chargeable as a share of one or more prime costs—as cost of board for laundry employees, which must be determined as a proportion of the cost of food, of cooking, and of serving for the institution as a whole; and ultimate accounts, showing final costs for the ultimate purposes of the institution. Two other considerations, virtually making new classifications, are noteworthy in connection with the bookkeeping entries which get the figures on the books; primary accounts are usually chargeable at the time an expense is incurred, but may be charged in either the special expense ledger or in the general ledger; secondary accounts are not usually charged when expense is incurred, but by monthly or annual distributions, and may be charged in either the special expense ledger or the general ledger; and ultimate accounts are chargeable only by monthly or annual transfers, and only on the general ledger. The list of accounts given be-

* As a statement of the uses of the various accounts for interest, depreciation, and repairs is necessarily too detailed for repetition, in connection with several departments, in a comprehensive list of this sort, usually only the titles are given here; the detailed discussion will be found on pp. 103-105.

low shows all three classifications—the nature of the account, the method of entry, and the ledger in which it appears.

Designation of Classes to Which Accounts Belong

This is accomplished by means of symbols; and therefore a discussion of these symbols should precede the list. Each account, moreover, has its individual symbol (easy to remember because of its mnemonic form); and this symbol serves the double purpose of classifying the account (showing its relation to the property accounts and to other expense accounts) and of simplifying all records in which the symbol may take the place of the full name of the account.

Plan of Symbols

The general plan of symbols for specific accounts may well be examined first, for it gives a brief survey of the most important classification.

Group Symbols

The first of two or more capital letters for a symbol (except E and I—which have already been appropriated for capital accounts and income accounts, respectively) indicates a large group of expense accounts as follows:

A administration
C corporation
D department
H house or property
P professional care of patients (Here P has a larger meaning than in capital or equipment accounts.)
R a summary of residents' (not employees', but patients', guests', students', etc.) costs
T a transfer account for getting detailed accounts into summary accounts

Symbols Indicating Divisions of Groups

An additional capital letter indicates a division of the group letter, and suggests its meaning either by its initial or by a relation equally obvious when once noted. Thus, M suggests *m*aterials, and is used for supplies; N is for *in*surance, because I is already in use; O suggests zero, or low temperature, and hence ice; Q suggests e*q*uipment; X suggests e*x*haustion; and Z suggests the tag-end, or remainder. The others, as shown below, are sufficiently obvious.

A annual report
B buildings, or board, as HMB (maintenance of household buildings), RBW (board of residents in wards)
C cubic space
D dispensary
E electric lighting, or emergency ward, as HE (house electric lighting), and PE (professional care of emergency cases)
F fuel
G gas
H housing, or housekeeping, or home nursing, as CH (corporation rent), DH (housekeeping department), and PH (professional home nursing)
I interest
K kitchen
L legal, laundry, or lawn, as AL (hospital legal expenses), DL (department of laundry), and HL (lawn)
M supplies, or ambulance, or maintenance, as PM (professional supplies), DM (ambulance department), HMB (maintenance of household buildings)
N insurance
O office, or ice, as AO (administrative office) and HO (household ice)
P postage, or pathological laboratory, or power, or private rooms, or plumbing, as AP (administrative postage), DP (department of pathological laboratory), HP (house power), RHP (housing of residents in private rooms), and HMP (maintenance of house plumbing)

Q equipment
R rent
S service, or steward, or surface, as AS (administrative service), DS (department of steward), and THS (transfer account for expense distributed on the basis of house floor surface)
T telephone, or training school, or taxes, as AT (general telephone), DT (department of training school), and HT (house taxes)
W water, or wards, as HW (household water), and RLW (laundry of residents in wards)
X X-Ray, or depreciation, as PX (professional use of X-Ray), and HXB (depreciation of house buildings)
Z miscellaneous

Wherever any letter has more than one designation, as indicated above, the meaning in the particular case will be sufficiently suggested by the other letters with which it is associated: for instance, DL is the Department of Laundry, but HL is the Lawn in connection with the Housing; DM is the Ambulance Department, but HMB is the Maintenance of Buildings under Housing costs; HW is Water for the Household, but RSW is Service to Residents in Wards.

Symbols Indicating Subdivisions of Accounts

The lower-case letters indicate subdivisions of the capital-letter divisions; second and third lower-case letters (rare) indicate further subdivisions. As far as possible lower-case letters have the same meaning as capital letters. Those having the same meaning are the following:

b board (also books)
f fuel (also freight or express)
h housing
i interest
l laundry

m supplies
o ice (also orderlies and outside)
p postage, or private rooms, or power (also special—as np, for special nurses)
t training (also table)
w wards (also stimulants)
x depreciation
z miscellaneous

The only new meanings here with arbitrary (not mnemonic) symbols are p and w; but p has already been used for private room (in which special nurses are employed), and w suggests *w*ine (stimulant).

Lower-case letters with no corresponding capital symbols are the following:*

a apparatus
d dormitory, or physician (*d*octor)
g graduate
s salaries (allied with service)
u uniforms
v inventory

If for any reason symbols are at any time changed, great care must be taken to avoid the confusion of overlapping old with new, and of changing in some places but not in others.

The Use of Symbols in the List of Accounts

We may now turn to the full table of expense accounts.

The letters in the first column indicate the method of entry: G shows that the account is a group account, representing the cost of a group of items of which the details are kept in the subordinate expense ledger and the totals are

* Many symbols are required for foods, but as they have no general application elsewhere they are separately listed where they occur—on pages 77-79.

transferred to the general ledger only monthly or annually. P shows that the account is a primary account and is charged directly—usually through the cash book or the voucher register. S shows that the account is a secondary account, so that usually charges are made to it only by monthly or annual transfers, or that it is an allowance account for the monthly or annual record of depreciation or interest. T indicates that the account is used solely for transfer purposes—chiefly for gathering prime costs together and distributing them to the secondary accounts. R indicates an ultimate account.

The symbol directly associated with the account itself, as shown in the second column, indicates not only its general classification, as already shown, but also its position —whether it is to be kept in the general ledger or in the subordinate expense ledger. If the symbol is composed exclusively of capital letters, the account should be preferably in the general ledger; if of capital and lower-case letters, it should be preferably in the subordinate expense ledger only.

Classified List of Expense Accounts

Administration

G AS Administrative Service

This group covers compensation for those engaged in general administration, and includes all services rendered for them in the way of compensation, such as board, rooms, and laundry. If any considerable part of the time of these persons is given to the work of any special department named below, as, for example, instruction in the training school, the compensation should be apportioned.

P ASs salaries

S ASb board

S ASr rooms *

S ASl laundry

This includes not only personal and room laundry of office employees living in the house, but office laundry—towels, for example.

G AO Office Expenses

P AOf express

This includes freight, express, and cartage on all office supplies and on all other supplies not having special accounts designated later. If there is question of an institution's doing its own carting, it is likely to be worth while to keep a special account for all carting, and then monthly to distribute the total charge to the departments concerned. Such an account would have for its symbol AC.

S AOh housing *

To this account is carried at monthly intervals the share of house expenses, such as fuel, lighting, water, care, etc., which is chargeable to this department.

P AOm stationery

All stationery used in hospital work, including pens, pencils, mucilage, blank books, etc., with the expense of printing—but not including stationery and printing for the treasurer's office, or printing annual reports and notices of meetings, or other corporation printing.

* A distinction is made technically in these accounts between rooms and housing. The former is for the use of employees, as a part of their compensation, but the latter is distinctly for hospital purposes.

P AOp postage

Postage for office use only, not including postage on annual reports or on notices of corporation meetings.

S AOi interest

Interest on equipment of office, including telephone equipment if not extensive.

S AOx depreciation

Depreciation on equipment of office, including telephone equipment if not extensive. (See discussion of depreciation, pp. 104-105.)

P AOz miscellaneous

This may include repairs and replacements of office equipment, insurance on such equipment, and traveling expenses. (See discussion of repairs, pp. 104-105.)

G AT Telephone and Telegraph

P ATs salaries

If the telephone is served by an employee who does other work also, the wages should be apportioned.

S ATb board

S ATr rooms

S ATl laundry

S ATh housing

S ATx depreciation (if switchboards, etc., are extensive)

P ATz miscellaneous

This should include any messenger service for telephone and telegraph purposes, and interest, insurance, etc., on equipment if extensive.

P AL Hospital Legal Expenses

Legal fees in connection with hospital operation and hospital bills, but not legal work in connection with corporation funds, legacies, etc.

P AZ Miscellaneous Administrative

Miscellaneous expenses connected with running the hospital as a whole and not belonging to any department or any accounts previously given or given later. These should be few.

Professional Care of Patients

G PS Professional Services

This is intended to cover whatever compensation is given, salaries, board, rooms, laundry, etc. If the work of anyone is divided between two or more groups of service, the compensation should be divided.

P PSd physicians

Usually physicians receive no salary, of course.

P PSns superintending nurses

P PSng graduate resident nurses

P PSnt nurses in training

P PSnp special nurses

P PSo orderlies

P PSop special orderlies

P PSw ward employees

S PSbp board p

Board of those who serve private-room patients only.

S PSbw board w

Board of those who serve ward patients only.

S PSbz board z

Board of those who serve both private-room and ward patients.

S PSrp rooms p (See board p.)

S PSrw rooms w (See board w.)

S PSrz rooms z (See board z.)

S PSlp laundry p (See board p.)

S PSlw laundry w (See board w.)

S PSlz laundry z (See board z.)

G PQ Equipment for Nurses

P PQu uniforms

This includes the cost of uniforms for nurses, less any payments for them made by nurses.

P PQb books

Reference books and periodicals for nurses—not training-school books and periodicals.

P PQa apparatus and instruments used by nurses alone

G PM * Medical and Surgical Facilities and Supplies

P PMa apparatus and instruments

Cost of apparatus and instruments to replace old ones and small items to maintain efficiency at a constant level, including insurance. This should include expenditures for this purpose from any special funds. Additions should be charged to the capital account (I or EPM).

P PMm medical and surgical supplies

This should include all supplies for this general purpose, such as medicines, disinfectants, alcohol, gauze, bandages, etc., but should not include stimulants.

P PMw stimulants

Wines, liquors, and other stimulants used for medical purposes. Flavoring spirits, carbonated waters, etc., should be charged as food.

S PMp power

Cost of power for running sterilizing plant.

S PMo ice

Ice for medical purposes, transferred from general ice account.

* If a pharmacist is employed, or any one has special care of medicines, accounts should be kept for wages, etc., as follows: PMs, PMb, PMr, and his laundry should be charged to PMl.

S PMl laundry

For operating room and pharmacy.

P PMf express

S PMh housing

This is for space expenses, such as heating, lighting, cleaning, etc., for the space occupied by store-rooms, pharmacy, and operating rooms (including sterilizing, anæsthetic and recovery rooms).

S PMi interest

S PMx depreciation

G PD Dispensary

P PDs salaries

S PDb board

S PDr rooms

S PDl laundry

P PDm supplies

Any medicines and supplies not purchased outside but received from the hospital proper should be debited here and credited to PMa, PMm, or PMw.

P PDf express

S PDh housing

S PDi interest

S PDx depreciation

P PDz miscellaneous

This would include repairs and replacement of equipment, and insurance.

G PE Emergency Ward

This group will be divided similarly to that for the Dispensary.

G PH Home Nursing

This group will be similarly subdivided, except that its equipment is normally not kept separate and therefore no account will be kept for interest and depreciation (PHi and PHx).

G PX X-Ray Service

This group will be divided similarly to that for the Dispensary.

Departments

G DM Ambulance Service

This group will be divided like that for the Dispensary. Repairs and insurance should be charged to DMm, however.

G DP Pathological Laboratory

This group will be divided similarly to that for Home Nursing, for as its equipment is usually wisely consolidated with that of the Professional Service Group (account A or EA, or PMa), no interest and depreciation need be entered here (DPi, and DPx).

G DT Training School

This account is intended to cover the expenses that pertain directly to the maintenance of the training school and have no relation to any other part of the hospital. These expenses would ordinarily be the compensation of teachers and the cost of space occupied by the class-rooms and the cost of supplies. It seems inadvisable to charge to this account any compensation paid to nurses in training, for that is usually given in return for services rendered in the general hospital work. Unless these direct expenses of the training school are kept by themselves and are not confused with expenses for work that serves other purposes, it is difficult to determine the comparative cost of nursing in hospitals which have such schools and in hospitals which have not.

P DTs salaries of teachers

S DTb board of teachers

S DTr rooms of teachers
S DTl laundry of teachers
P DTm supplies
This should include diplomas and cost of graduating exercises.
P DTf express
S DTh housing
S DTi interest
S DTx depreciation
P DTz miscellaneous
G DS Steward's Department
P DSs salaries
This includes wages of all persons engaged in ordering, receiving, checking, storing, and issuing food as purchased, or the proportionate part of the wages of any persons engaged partly in this work.
S DSb board
S DSr rooms
S DSl laundry
P DSmb* bread and pastry
Purchased outside, including crackers and other bakers' products.
P DSmcf flour

* The list of subdivisions of food looks unduly long, but it has been devised with the assistance of several food experts and institution managers. The purpose of the subdivision is to give indication of the kind of diet furnished; for without that a judgment of food costs is wholly unwarranted. Much further subdivision is recommended, and that suggested here is the minimum deemed serviceable. Some hospitals keep separate costs for over two hundred fifty food staples, and believe the figures worth while.

The scheme of symbols is as follows:

The symbol for all food supplies begins with DSm—which is normal. The next letter indicates the kind of food, thus: b, bread; c, cereal; d, dairy product; e, eggs; f, fruit; g, groceries; h, (*h*oney) sweets; i, ice cream; m, meats; n, nuts; p, poultry; s, (*s*ea) fish; t, tea and coffee; v, vegetables. The third lower-case letter (the second after DSm) indicates the form of the food, thus: b, breakfast preparations; c, canned, or cream; d, dried; f, fresh, or fat; j, juice; m, milk; p, preserved; s, soured, or storage. Obviously in making notations on bills, etc., for bookkeeping purposes, it would be absurd to use the full symbol for each supply purchased. Only the letters following the DSm would be used, thus: b, bread; dm, milk; sf, fresh fish. On memoranda not obviously connected with food supplies, however, the full symbol should be used.

P DSmcb breakfast foods and other table cereals
P DSmdc cream
P DSmdm milk
P DSmdp condensed milk
P DSmds cheese
P DSmdf butter and other table and culinary fats
This should include table and culinary oils.
P DSmi ice cream
Purchased outside.
P DSmef eggs, fresh
P DSmes eggs, culinary
Storage eggs not deemed suitable for table service should be entered here.
P DSmep egg preparations
Desiccated and powdered eggs should be entered here.
P DSmff fruits, fresh
P DSmfc fruits, canned
Fruits preserved by sweetening should not be entered here.
P DSmfd fruits, dried
P DSmfp fruits, preserved
Preserves, jams, jellies, syrups, and crystallized fruits.
P DSmfj fruit juices
P DSmvf vegetables, fresh
P DSmvc vegetables, canned
P DSmmf meats, fresh
P DSmmd meats, smoked, cured, and dried
P DSmmc meats, canned
P DSmpf poultry, fresh
P DSmpc poultry, canned
P DSmsf fish, fresh
P DSmsd fish, smoked, dried, and pickled
P DSmsc fish, canned
P DSmn nuts and nut products

P	DSmh	sugars, syrups (not fruit), molasses, honey, confectionery
P	DSmt	tea and coffee This should not include coffee substitutes, such as cereal drinks, cocoa, etc.
P	DSmg	groceries and canned goods not specified
S	DSo	ice
P	DSf	express
S	DSh	housing
S	DSi	interest
S	DSx	depreciation
P	DSz	miscellaneous Supplies not food, and repairs, replacements, and insurance of equipment.
G	DK	Kitchen Department
P	DKsb	wages of bakers
P	DKsz	wages of other kitchen employees
S	DKb	board
S	DKr	rooms
S	DKl	laundry
P	DKmf	fuel To this account should be debited not only coal, gas, wood, etc., used in the kitchen, but also at convenient intervals a charge for power for steam at steam tables.
P	DKmz	supplies This should cover not only soap and other supplies consumed in the kitchen, but replacements, repairs, and insurance of kitchen utensils. It does not include any food or fuel.
P	DKf	express
S	DKh	housing
S	DKi	interest
S	DKx	depreciation

G	DH	Household Department
P	DHs	wages
		Wages of all help engaged in cleaning, sweeping, dusting, dining-room work, etc. If any are engaged only partly in this work, their wages should be apportioned. Under some conditions it may be worth while to maintain a separate account for dining-room service, and for chamber work; for the requirements of service may be peculiar. The new accounts would be designated DHst and DHsd, and the present DHs would become DHsz. DHbt, DHbd, DHrt, DHrd, DHlt, and DHld would also be created. Then DHb would become DHbz, DHr would become DHrz, and DHl would become DHlz. (See also page 89).
S	DHb	board
S	DHr	rooms
S	DHl	laundry
P	DHmd	supplies d
		Replacements and repairs of furniture, linen, bedding, etc., for dormitories and patients' sleeping accommodations, including insurance on such equipment.
P	DHmt	supplies t
		Replacements and repairs of dining-room equipment, glassware, crockery, trays, etc., and table linen, including insurance on such equipment.
P	DHmz	supplies z
		Brooms, brushes, scrubbing soap, and all other supplies used in general housekeeping and not included elsewhere here, replacement and repairs of general furniture, and insurance on it.

P	DHf	express
S	DHid	interest on dormitory equipment
S	DHit	interest on table equipment
S	DHiz	interest on general housekeeping equipment
S	DHxd	depreciation on dormitory equipment
S	DHxt	depreciation on table equipment
S	DHxz	depreciation on general housekeeping equipment
G	DL	Laundry
P	DLs	wages
S	DLb	board
S	DLr	rooms
S	DLl	laundry
P	DLmf	fuel Not only coal, gas, etc., but also a proportion of power when steam or electricity is used.
P	DLmz	supplies Not only starch, wax, bleaching agents, soap, etc., but repairs, replacements and insurance of equipment—but not fuel.
P	DLf	express
S	DLh	housing
S	DLi	interest
S	DLx	depreciation
P	DLo	outside laundry work

General House and Property Expenses

P	HT	Taxes On property occupied by the hospital. Taxes on other property should be charged as debits to the income account of that property, or, if the property does not produce income, to corporation income.

P	HE	Electric Lighting
P	HG	Gas Gas used for other than lighting purposes should be charged to DKmf or DLmf.
P	HF	Fuel, Oil, and Waste
P	HW	Water
P	HO	Ice The amount is later distributed in part to the Steward's Department and to Medical and Surgical Supplies.
S	HP	Power This account should be charged for any power used for general house purposes, such as elevators and heating.
P	HR	Rent To this account should be charged only rental paid for buildings not owned.
P	HMB	Maintenance of Buildings To this account should be charged the cost of repairs only, but not repairs of plumbing and steam-fitting. Additions and improvements should be charged to capital account (account B, or EB).
S	HXB	Depreciation of Buildings Depreciation of any improvements above the land, including plumbing and steam-fitting.
P	HL	Care of Grounds This includes cost of snow shovelling, lawn mowing, and care of flower beds.
P	HMQ	Maintenance of Machinery and Tools Replacements and repairs only. Additions should be charged to the capital account (account Q, or EHQ).
S	HXQ	Depreciation of Machinery and Tools

P	HMP	Maintenance of Plumbing and Steam-fitting
G	HS	Boiler-Room Compensation This account covers compensation of engineers and firemen. It should be credited for any work done by these men in care of grounds, repairs of buildings, etc., and the appropriate accounts should be debited.
P	HSs	wages
S	HSb	board
S	HSr	rooms
S	HSl	laundry
P	HN	Insurance This should include insurance on buildings and their equipment (not departmental), and only that portion that falls within the period. When insurance is paid for longer terms, the excess should be charged to Prepaid Insurance, and at proper intervals, as the insurance accrues, should be transferred to this account. To this account should be charged only insurance on property used by the hospital. Insurance on property held as investment should be charged to the income of the investment, or to general income if the property bears no income. Insurance on property used by departments should be charged to the departments—account z or m*.

* When account m is primarily for supplies to be consumed, as with PMm and DSm, insurance is carried to z; but when m is primarily a maintenance account, insurance is carried thither. The maintenance account of PM is PMa.

G HZ Miscellaneous

P HZf express

On any general house and property equipment.

P HZz miscellaneous

Items pertaining to house and property not elsewhere provided for and not administrative, professional, or departmental, should be charged here. If, for example, the hospital provides local transportation for visitors and employees and does not collect enough from passengers to meet expenses, the deficit should be charged to this account

S HIB Interest B

On improvements—buildings and grounds.

S HIQ Interest Q

On machinery and tools.

Transfer Accounts

T THS Floor Space Cost

To this account are transferred all primary accounts that are to be distributed on the basis of floor-space dimension, such as housekeeping wages, care of grounds, etc.

T THC Cubic Space Cost

To this account are transferred all primary accounts that are to be distributed on the basis of cubic space, such as heating, maintenance of buildings, etc.

T TB Transfer Board

To this account are transferred all primary accounts that cover board items, such as food supplies, kitchen wages, etc.; and these are hence distributed

to the various departments, as their employees receive board, and to patients.

T TP Transfer Power

To this account are transferred all primary accounts that cover power costs, of whatever type; and these are hence distributed to departments on the basis of the use made of power.

RESIDENT ACCOUNTS

R RHP Private-Room Housing

To this account is carried the portion of total space cost chargeable to private rooms.

R RHW Ward Housing

To this account is carried the portion of total space cost chargeable to wards.

R RBP Private-Room Patient Board

To this account are carried all board costs chargeable to private-room patients.

R RBW Ward Patient Board

To this account are carried all board costs chargeable to ward patients.

R RLP Private-Room Laundry

Proportion of laundry costs chargeable to private-room patients.

R RLW Ward Laundry

Proportion of laundry costs chargeable to ward patients.

R RSP Private-Room Professional Service

Proportion of professional care of patients chargeable to those in private rooms.

R RSW Ward Professional Service

Proportion of professional care of patients chargeable to those in wards.

R	RAP	Private-Room Administrative Costs Proportion of administrative costs chargeable to those in private rooms.
R	RAW	Ward Administrative Costs Proportion of administrative costs chargeable to those in wards.

CORPORATION EXPENSES

P	CS	Corporation Salaries
P	CM	Corporation Stationery Stationery for corporation purposes, such as notices of meetings, solicitation of gifts, including printing (but not annual report).
P	CP	Corporation Postage Postage on corporation matters, including notices of meetings, but not postage on annual report.
P	CA	Annual Report Expense of printing and mailing annual reports, with postage. This is often heavy and should be shown by itself.
P	CL	Corporation Legal Expenses Legal expenses in connection with investments, donations, legacies, and other corporation matters not connected with the operation of the hospital itself.
P	CH	Corporation Housing Housing expenses for the corporation offices, or rental paid.
P	CI	Corporation Interest Charges Interest on mortgages and loans payable. Interest earned is not to be credited to this interest account, but to the corresponding income account.
P	CZ	Corporation Miscellaneous Corporation expenses not otherwise provided for.

Complete Report of Expense Accounts Desirable

It is desirable that institutions using this plan of accounting shall report all accounts here given, in order that other institutions may have figures for comparison. If in any institution certain accounts have no figures, because no work is done of the sort intended to be covered by the account, the account should preferably appear in the report with no figures extended. This will enable one reading the report to see conditions at a glance. If, for instance, DMr is blank, it should be true that the driver of the ambulance does not have a room on the premises A blank after PSd shows either that there are no resident physicians or that resident physicians receive no pay. If, of course, a whole group of accounts has no figures, as, for instance, those for the pathological laboratory, it is unnecessary to report the subordinate accounts in detail in blank, for a blank for DP alone will serve the purpose.

It is desirable that the total of the debit side of the accounts named above shall be reported (except so far as any items have been entered as credits merely to offset erroneous debits); for since many transfers are made in the closing processes, as described in Chapter VII, reporting only net debits would remove many accounts entirely. The total of the debits, then, will not be the total of hospital expenses, but will be far more than that, for many transfers bring some items into several places. The total expenses are shown in schedule IV (page 192). The expense accounts named above are intended to show details, and when a detail forms a part of several groups it should be reported in all of them. Food, for example, is charged to DS in total; the part consumed by nurses is charged to PSb; and PSb is in turn charged to RSP and RSW. So certain food is charged three times. It ought to be charged three times, however, for we may wish to study it in all three

connections. The total of all accounts in this list, therefore, is meaningless. In order to check the correctness of the figures, however, from the total of all such debits should be subtracted the total of all transfers; the balance should agree with the expenses shown by schedule IV. The amount to be deducted for such transfers may be determined easily from the journal on which such transfers are made, or from the general ledger. A glance at the skeleton ledger (page 226) suggests the ease with which it may be learned.

If it is objected that no hospital could report so many details, one may point to many railroad reports that give, in small compass, quite as much detail of operating cost as that suggested here. Many hospitals report much more detail in matters of less importance.

Subdivision and Extension of Classification

It may be desirable in any hospital to determine costs for certain subdivisions not here indicated—for example, in a maternity ward, or in a tuberculosis ward, as subdivisions under a general surgical or medical ward. Obviously in such a case the only alteration required in the plan is the creation of a new general-ledger group account, with its appropriate subdivisions in the expense ledger for wages, board, rooms, housing, etc. In no case is any complication created except that of increasing the number of accounts and the number of distributions of the joint or burden costs.

It may be desirable also to keep accounts for some departments not here indicated, but considered in this book in connection with the work of other institutions. Especially is this likely to be true of sanitaria. Such departments are those having charge of baths, tennis courts, golf courses, gymnasia, etc.

New York Hospital Plan of Accounting

A plan of hospital accounting that is excellent for the care of prime costs—but does not attempt to provide accurately for the distribution of items common to various departments, such as board of employees—is in use in many hospitals. It is commonly called the New York Hospital Plan. The basis of the classification of accounts used in this book is intentionally such that hospitals using this classification may make comparisons with hospitals using the New York Plan, for the main divisions are the same. Certain combinations of accounts shown here have the same content as individual accounts or obvious combinations of accounts shown under that plan. Appendix C names (by symbol) the accounts shown in this book which agree in content with the main accounts (indicated by number) of the other plan.

Dining-Room Service

One peculiarity of a hospital is that the meals of patients are usually served in their rooms or at their bedsides. The dining-room service is for employees. Consequently in the plan outlined for hospitals the cost of dining-room service is a mere incidental of housekeeping, and is distributed in common wth other housekeeping costs. The amount is so small that further refinement of distribution is deemed unnecessary. For many institutions, on the other hand, and sometimes even for hospitals, dining-room service is an important element of cost. Such are colleges, clubs, and hotels. For these either a separate account should be provided (DD), or subdivision should be made of the housekeeping department (DH). If a new department is created it would have its place in the general ledger, and its subdivisions (DDs, DDb, DDr, DDh, DDl, DDm, DDf, DDi, DDx) would have their places in the subordinate ledger.

Expense Accounts for Educational Institutions

For convenience of discussion, institutions other than hospitals may be divided into two classes: colleges, schools, and other educational institutions, on one hand, and hostelries, clubs, etc., on the other.

For educational institutions the important peculiar expense accounts, classified by departments already indicated for the capital accounts of such institutions, are likely to fall in the following groups:

G	SG	Instruction orally for students in residence (Below are indicated subdivisions on the basis of the rank of teachers. In many institutions one account for salaries—SGs—would suffice. In many, on the other hand, subdivision is on the basis of subjects taught (or teaching departments). Such details are usually not worth maintaining on principal books of account, however, for since salaries are continuous they may be learned statistically at any time. A division of cost of supplies, secretarial assistance, etc., between departments is likely to be worth while. Provision is easily made for such subdivision.)
P	SGsm	salaries of masters and professors
P	SGsa	salaries of assistant masters or assistant professors
P	SGsi	salaries of teachers or instructors
P	SGsp	salaries of special teachers or lecturers
P	SGsd	salaries of assistants, demonstrators, etc.
P	SGss	secretarial service for teachers
S	SGr	rooms for teachers
S	SGb	board of teachers
S	SGl	laundry of teachers

P	SGm	supplies (chalk, stationery, etc., for classes) and maintenance of equipment
P	SGf	express
S	SGh	housing
S	SGi	interest on equipment
S	SGx	depreciation of equipment
G	SE	Instruction for extension students (This will have practically the same subdivisions as the account for instruction of students in residence.)
G	SC	Instruction by correspondence (This will have practically the same subdivisions as the account for instruction of students in residence; but, of course, SCss will have very much more importance, and it would be worth while to maintain an account for postage—SCp.)
G	SL	Laboratories for students' use (The subdivisions of this account will be very much the same as for SG, except that the salaries hardly need subdivision.)
G	PL	Laboratories for research (This will have virtually the same subdivisions as those above; but the only salaries may happen to be for assistants not engaged in teaching. The symbol would naturally be PLs.)
G	SB	Libraries for students' use (The subdivisions will be similar to those above, except that other classes of salaries will be substituted for those given in the group of instruction—for instance: SBsa, administrative officers; SBso, accession department clerks; SBsc, cataloguers and classifiers; SBss, secretarial service for officers; SBsp,

shelf-department clerks; SBsl, loan clerks engaged in the receipt and delivery of books; SBse, runners and errand boys; SBsr, reference department clerks; SBsb, bindery employees; SBsz, miscellaneous employees engaged in general service. Binding materials should be charged to SBmb. If, however, much binding is done in the library, a separate department should be created and all costs (interest, depreciation, etc.) should be charged to it. In any case, records should distinguish the costs of rebinding old bound books from those of binding pamphlets, magazines, and newspapers. The cost of rebinding should be carried as one of the regular expenses; but the costs of binding separate parts into a volume should be annually credited to the expense accounts—for they add to the capital value—and debited to the corresponding capital accounts. If desired, all binding costs may be combined into one account, SBg, (glue) whether the work is done inside or outside.)

G PB Libraries for research

(This account should be treated similarly to the general library account.)

G SM Museums and other permanent exhibitions

(This should be treated similarly to SB, except that the exact titles will differ somewhat. The principal wages account, SMs, should include only the cost of service for exhibition purposes. The cost of service for mounting, collecting, classifying, etc.,

should be charged to capital accounts—possibly with such subdivisions as ESMs for service and ESMm for supplies used. This would distinguish such costs throughout the year; but they should be ultimately closed out to the general account for museum equipment—ESM.)

G SO Observatories for students

(The subdivisions here would be similar to those above.)

G PO Observatories for research

(This would probably require considerable subdivision, such as the following: POso, salaries of observers; POsc, salaries of computers; POsp, salaries of photographers; POss, salaries of recording clerks; POsz, salaries of general employees; POb, books; POp, postage; POf, freight; POmp, photographic supplies; POmz, general supplies.)

G HH Public halls

(It is hardly probable that any expense accounts will be required for these except for interest, depreciation, repairs, insurance, taxes, light, and heat—all of which would be charged as space-cost distribution, HHh—with wages of care, HHs, and such supplies as chanced to be consumed, either directly or in maintenance of facilities. Maintenance of facilities should be charged to HHm, but maintenance of the building proper should be charged to HMB.)

G DI Gymnasium

(Salaries might well be divided, e.g.—DIsi, salaries of instructors; DIsa, salaries of attendants and rubbers; DIsz, salaries of general employees; but the time of persons employed in repairing apparatus should be charged to DIm, with other maintenance.)

Expense Accounts for Hotels, Clubs, Etc.

The accounts for institutions not engaged in either instruction or the care of inmates—such as hotels, clubs, etc. —need not usually be complicated by great detail except in those departments already worked out for hospitals or colleges, as indicated above. The special accounts would be, as suggested by the discussion of capital accounts, as follows:

G DE Entertainments

(This account would usually contain only the sums paid to entertainers, or for the purchase of theatrical properties, etc. If the properties are of permanent value they should be charged to the capital or equipment account.)

G DV Golf Links

(The only subdivision of labor probably necessary here is between the administrative and the ground men; but except in large establishments this would not be worth while. If, however, caddies are paid by the institution, their wages should be kept separate.)

G DT Tennis Courts

(The subdivision would be the same as for golf links. The symbol used here is the same as that for the department of training school in a hospital, but it is improbable that any institution will require both accounts. If so, DX is available for tennis.)

G DW Baths

(It is probably worth while to distinguish between the salaries of swimming instructors, DWsi, attendants in bathrooms, DWsa, and general employees, DWsz.)

G DA Boats

(If any persons are employed to give instruction in rowing and paddling, their salaries should be distinguished, DAsi, from those of attendants and workmen engaged in keeping the equipment in use and in repair, DAsz.)

G DO Bowling Alley

(The same principles apply here, and below.)

G DR Billiard Rooms

G DQ Card Rooms

G DJ Stable

(This account should be carefully subdivided so as to show the various costs for salaries of drivers, of hostlers, and of messengers; for feed; for repairs and maintenance of harnesses; for repairs and maintenance of vehicles; for replacement of robes; for care of horses. Conditions are likely to vary so much that it is hardly worth while to designate the accounts by name. Each subdivision of service should be given a symbol with a lower-case letter following the departmental symbol. See alphabetical list of symbols, page 208, for suggestions.)

G DG Garage

(The same principles would apply for this as for the stable—distinguishing drivers from mechanicians when the functions are kept apart, and keeping separate oil, gasoline, repairs, etc. See alphabetical list of symbols, page 207, for suggestions.)

G DF Cartage

(This would be subdivided similarly to the account for the stable.)

G DY Bar

(Care should be taken that adequate provision is made for maintenance or depreciation of glassware, etc.)

G DN News Stand

G DC Cigar Stand

If a club maintains a library or an exhibition, the expense accounts would be similar to those for the corresponding departments of a college. The symbols, however, would naturally be, for the library, DB rather than SB or PB, and, for the exhibition, DM rather than SM.

Publicity Expense Accounts

Both educational and entertaining institutions are likely to need one set of accounts not required by hospitals—those connected more or less directly with publicity or the cultivation of cordial relations with remote communities. This gives rise to three new accounts—Advertising, Hospitality, Publications (not advertising). These might well be carried each in a general ledger account, designated as OA, OH, OP, respectively (O suggesting relations with the outside public). Hospitals issuing medical monographs or journals should maintain account OP.

Interest, Insurance, Taxes, Etc.

Institutions other than hospitals should also count as a cost interest on the value of their land as well as insurance, taxes, etc., already indicated; for with them a wide variety of choice of sites is usually open, and the choice affects cost directly; but most hospitals have their sites prescribed largely by their field of work. A separate account should be maintained for such interest, however, so that comparisons with institutions under other conditions can be made without confusion. A natural symbol would be HIO (contrasted with HIB for buildings).

CHAPTER V

THE METHOD OF DETERMINING COSTS IN DETAIL

We may now turn to the methods by which we hope to produce ultimate figures of cost. It may be well to begin at what is chronologically the wrong end, and see what figures we are aiming at, and then look back and see how they may be attained. Our ultimate aim is a statement that may be called the "final summary of institution expenses." This shows not only the totals for various groups of expense, but the conversion of all those expenses into a cost per unit.

The Cost Unit

Since one of the best types of institution that we can use for purpose of illustration is—here, as before—a hospital, let us see some imaginary figures for the types of expenditure to be met.

Most expenses should be shown for the unit of the patient-day; but a distinction should be made between ward patients and private-room patients, because the conditions of service are widely different and the expenses are much higher in one than in the other. Many items, however, are not useful statistically on the basis of the patient-day. Ambulance service, for example, is the same for a person brought to the hospital for a two-days' stay as for one brought for a three-months' stay. Not usually are twice as many laboratory tests or examinations made for a patient who stays a month as for one who stays a fortnight. For

these various special items of expense, therefore, the unit for which costs are to be figured should be determined solely by the nature of the service rendered. The unit for ambulance service, for example, is a trip; for the dispensary it is a treatment; for the home nursing department it is a visit.

Our final statement, therefore, should give us a unit cost for all types of service rendered, divided, however, not only on the basis of the kind of service rendered, but also on the type of patient for whom it is rendered. Any figures less distinct, less specialized than these, fail to serve the purposes which animate us in a plan of uniform accounts; for, unless we have final unit costs, it is impossible to make comparisons between institutions working under varying conditions—as between a hospital where the nursing is done mostly by nurses in training without wages and hospitals employing only graduate nurses, or between schools utilizing the services of scholars for household labor, schools employing only paid laborers who board outside, and schools using only employees boarding on the premises.

Expenditures on Account of Employees

The obvious difficulty in the way of getting these final figures is to make distinctions, as we go along, between expenditure on account of employees and expenditure on account of the persons for whom the institution is primarily maintained—as patients in a hospital, pupils in a school, guests in a hotel or club. In the first place, no supplies should be issued without a requisition upon the stores department, for otherwise there is no knowing what is their destination. These requisitions accomplish the purpose, without much labor, for everything except foods; but in this respect, since in any large establishment several tables

are likely to be maintained and many foods are common to them all, care is necessary to see that each table is charged for its actual consumption.

Distribution of Food Costs

If proper account is taken of the number of persons sharing in each kind of dietary, so that the figures may show for what the various departments are chargeable on account of board, the accounting may be simple, with a unit cost for each type of table. The actual consumption of food for each type of dietary is determined by a division of all foods consumed into three sorts—those peculiar to each type of dietary (called "special food"), those common to several types of dietary but consumed only occasionally (called "common occasional foods"), and those of practically continuous consumption, such as flour, butter, eggs, sugar, etc. (called "common regular foods"). For all special and occasional foods the mere preparation demands that someone shall note for each meal what is required. For all common regular foods the consumption may be learned from stores records. So full information is at hand. The transfer of these figures of requirement and of stores to sheets recording the consumption of all foods furnishes all necessary material for the determination of the cost of food for each type of dietary. In the following chapter will be found forms which simplify the process of recording and calculating these costs. Since the time books will show the number of employees in each department on each dietary, it is a simple matter to determine for each class of table the amount which should be charged to that department for the board of those employees.

Distribution of Housing Costs

Similarly, the cost of lodging for the various employees should be distributed to the departments responsible for

them. Indeed, a general distribution of all housing costs throughout the institution should be made at least annually. To do this does not require inordinate labor. When once the floor space and cubic space of the rooms occupied by the various departments, and of the quarters used as lodgings by employees of the departments, have been calculated, it is easy to determine what proportion of all the costs relating to housing should be charged to each department. If the dining-room, for instance, occupies one thousand square feet and the whole establishment occupies fifty thousand square feet, the serving department should bear one-fiftieth of this group of expenses—as well, of course, as an additional share determined by the floor space of waitresses' sleeping rooms. Certain items, like cleaning, should usually be distributed on the basis of floor space; heating, lighting, and building repairs should usually be distributed on the basis of cubic space; but in any particular case it is necessary to consider the circumstances of the institution before the space-cost distribution can be made satisfactorily. It would be unfair, for instance, to charge a department for light on the basis of cubic capacity if in that department light is used only at rare intervals, or only for a desk situated in a corner. Practically all the house and property charges, including heating and lighting, insurance, taxes, rentals, care of grounds, etc., may be distributed on this space-cost plan; and when once the calculations have been made determining the percentage for each department, no further calculations need be made, except to apply the fixed percentage to the total cost, until some rearrangement of housing has been made. The calculation of these figures, moreover, is not laborious if only one takes advantage of such mechanical devices as the slide rule and computing machines.

Expenditures for Those Not Employees

It is obvious that if we charge to each department the board, lodging, and laundry of its employees—and credit the board account, the housing accounts, and the laundry account for those sums—the amount remaining as a charge to the board account, the housing accounts, and the laundry account, is the amount directly chargeable to the service of those for whom the institution is primarily maintained—whether patients, guests, students, or what not. This, of course, is the ultimate figure which every one is seeking, in order that comparison may be possible between different institutions; and the method outlined allows for all differences of condition not inherent in the situation itself, such as boarding employees in or out, owning or hiring quarters, buying or making electricity, etc.

Cost Accounting Methods

The bookkeeping methods by which all this can be brought about may be worth summarizing. The various departments of an institution should be given general accounts in the general ledger, and for convenience in making memoranda, etc., each should have its symbol, as already indicated. These departmental accounts may be represented in a subordinate expense ledger containing an account for each type of direct expense pertaining to them—such, for example, as express, stationery, and postage, under office expense. Each of these departmental, or general, accounts would preferably have in this subordinate ledger certain other subdivisions, or secondary accounts, to be used ordinarily only for transfer or closing entries at the end of each month, quarter, or year. As in the ordinary course of bookkeeping, the direct expense accounts, such as have been just enumerated for office expense, are debited from the cash book or the voucher register; and this

plan would require no change in the method except the provision of this special expense ledger to show in detail the items shown in lump sum on the general-ledger account. The various items which cannot be easily charged directly to departments as payment is made, such as board, lodging, interest, depreciation, etc., would be charged first to general accounts, or certain subdivisions of those accounts, and would be distributed at the end of any convenient period to the proper departmental accounts. The form and use of this ledger are described and illustrated on pages 108 *et seq.*

Cost Accounting Results

The result of all this is the possibility of learning accurate costs all along the line—total costs per capita day, costs per capita day for large groups of expense, costs per capita day for small detailed items of expense, and actual amounts of expense for both large and small divisions. These, moreover, would be all put on the same plane, e. g., compensation would be *all* compensation, whether in wages, board, or what not, and so institutions under different conditions in such respects could be compared, and within an institution comparisons could be made of different methods. Only when this sort of thing is done can any valuable comparisons be made, for no two institutions are operated under quite the same conditions.

Requirements of Cost Comparisons

In the schedule of current expenses shown in the preceding chapter, pages 70-86, it is to be noticed that some items appear for practically all groups of accounts, such as, for example, salaries, board, rooms or housing, laundry, express, interest, and depreciation. As already several times suggested, the cost of no department is adequately shown unless all elements entering into the compensation of employees, whether paid directly or indirectly, are charged

to that department; for otherwise an institution supplying its employees with a portion of their meals but no sleeping apartments or laundry, an institution furnishing sleeping apartments and board and laundry, and an institution supplying none of these but only a direct salary, could not be compared so as to yield results of any value.

Transportation Charges

Freight and express, though they are usually items of small weight, may now and then appear as of considerable importance—especially in a comparison between two institutions both in the country when one of them buys in the home market and pays local prices and the other buys in the metropolitan market and pays for transportation. Any difference of conditions which has an effect upon costs, in any line of activity, should have an effect also upon the accounts; and these should indicate all items in the circumstances which are susceptible of separate statement. For this reason transportation is separately shown here, even though in most cases it is intrinsically of little importance.

Interest on Investment

Many persons of business experience, and many accountants, deny that interest on investment is a cost, and they are unwilling to show interest anywhere on a business statement except as a final deduction from gross profits, or as one element in the final net profit. However advisable may be this handling of interest in businesses of which the prime purpose is the making of profit, wherever we are concerned primarily with service rather than with profit we must recognize the fact that comparative costs may be badly misleading if this element is omitted. Whoever operates with expensive equipment may, if the equipment is well chosen and the direction of labor is efficient, largely reduce his labor cost and save in this way far more than

enough to offset the cost of keeping up equipment; but, on the other hand, though the saving arising from expensive equipment may be more than enough to take care of maintenance and insurance, it may not be enough to make the purchase of the equipment worth while when one allows for interest on the capital so locked up. Although usually an institution does not pay interest upon the property it employs, virtually never is interest negligible; for either the institution is collecting, from outsiders, for the purchase of equipment, funds which otherwise it might employ in rendering a larger service to the community, or else it is spending, for equipment, funds which it might otherwise invest to yield a direct income. It is hardly conceivable that interest on equipment shall be anything else than a cost to any institution, even though the interest is not directly paid out. As already indicated, moreover, only when interest on equipment is counted as a cost can one learn whether one administration is more economical than another in its purchase of equipment and expenditure for labor.

Depreciation

Depreciation has come in these days to be universally recognized as one of the costs of doing business. The rate at which it must be figured, however, is a debatable point, and in any given case there may be a dozen opinions equally entitled on the face of things to acceptance. The fundamental principle is that enough must be allowed for annual depreciation to provide for repairs and replacement whenever these are probably to be necessary, and the necessity may arise either from wear and tear or from the fact that, with the advance of science and invention, new equipment may prove to be so great an improvement over old that an institution that fails to purchase it is not rendering to the community the service rightfully expected of it.

Additions to Equipment and Replacements

Sometimes confusion exists in the minds of persons not familiar with accounting as to the difference between new equipment and replacements. It should be clearly understood that the purchase of new equipment to take the place of old which has been worn out or superseded by more recent types is not an addition to the equipment of the institution, for the wearing out of old equipment is just as much one of the costs of doing business as is the payment of wages and the consumption of food. The purchase of new equipment replacing old is nothing but payment for equipment displaced. If, again, certain property in a department has been allowed to depreciate without replacement, but some other property in the same department has been increased in value possibly by the installation of better equipment than that worn out or of a larger amount of equipment than that displaced, it may be true that the property of the department as a whole has not depreciated in value, for though some specific property has depreciated other property has more than made up the shrinkage in its own type. Whether, therefore, the property of a department as a whole shall be considered to have depreciated or not is a question not of the decrease in value in any particular bit of equipment, but only of the decrease in the value of the property of the department as a whole. Actual increase should be charged not to replacements, but to the capital account—equipment.

Professional Care of Patients

The subdivisions of current expense for professional care of patients, as shown in the classifications of the preceding chapter, seem numerous, but if a comparison is to be made between two hospitals, or between different years in the same hospital, one must know what type of

nursing is provided; and any mere lump figure for nurses would leave one very much in the dark. For this reason four groups of nurses' wages are shown, namely: superintending, graduate resident, nurses in training, and special nurses. Since the special nurses are usually paid by patients, or at least the hospital is compensated by a special charge for their wages, this does not comprise an ultimate cost; but it should be shown, because the board, rooms, and laundry of such nurses are likely to be supplied by the hospital and charge is made for these; so that necessarily some costs in connection with them get into the hospital books, and therefore all costs in connection with them, even though those costs be refunded, should appear. Since, moreover, our aim is a complete record of current expenses, rather than a mere record of ultimate loss or gain, we should include special nurses' wages in our total costs for the professional care of patients. If a hospital increases the proportion of graduate resident nurses to that of nurses in training, its costs will obviously increase; and only if these two items are separately shown will evidence appear clearly that this shift of ratio has occurred.

Transfers between Departments

Transfers between one department and another within an institution are likely to be of frequent occurrence. Whenever these occur, an error will creep into the figures of costs of both departments unless a proper record is made of that transfer. If, for instance, supplies are taken from the general medical stores of the hospital and sent to the dispensary, care should be taken that the account for dispensary supplies shall be debited and the account for general medical supplies, for the hospital proper, shall be credited.

Detailed entries for the process of closing the books and bringing related items together are indicated in Chapter VII.

CHAPTER VI

FORMS FOR THE DETERMINATION OF COSTS

The forms shown herein are intended to provide the means of getting virtually all the information that is required for a final accurate distribution of general burden cost through the various departments. It is unlikely that in all institutions the managers will think it desirable to carry the subdivisions of accounts as far as has been suggested in the foregoing chapters. In that case, many of the forms indicated beyond—such, for instance, as form 25—will be unnecessary. No attempt has been made, in the forms shown, to indicate those which are essential and those which are merely valuable, for conditions must determine that in any case. It is believed worth while for any institution to keep the records completely, and to utilize all the accounts and all the forms (or their equivalents) here shown; but if that seems to any managers too great a refinement of method, all the information here recommended may be gathered for certain short periods throughout the year and may then be used to establish rough proportions and averages; it will be seen, for instance, that the accounts and forms recommended here, if used for one month in six, or possibly even a fortnight out of each half year—if that fortnight is chosen with care as a fair criterion for judging averages—will enable one to approximate the costs of a year as a whole without undue labor in record making. Then the final summary, schedule IV (page 192), may be filled out with something at least

approaching accuracy. The ideal condition, however, is complete record through the year.

The forms have been devised for hospital use, but virtually all of them are applicable, with mere changes of names, to other institutions.

As a suggestion to managers intending to provide printed copies of any of these forms, the items supposed to be filled in by hand are here in italics and the standard items are in roman.

Form D, Expense Ledger

This form (page 110) shows the method, to which attention has already been called, of handling an expense ledger. The purpose of this ledger is to show the details for the various departments without burdening the general ledger with anything but summaries. It will be noticed that every subdivision of a general-department account has in this form D two columns, and that there is an additional pair of columns for totals. The intention is to gather from the cash book, from the journal, and from any other source, such as the voucher register, all items belonging to any subdivision of a department. Then (1) the totals for the subdivisions may be added together to produce the total for the department for the month, and (2) each separate subdivision may be treated cumulatively to produce the total of that subdivision for any group of months, and (3) we may at the same time learn from the general ledger the total for all subdivisions for any group of months. Since credits to expense accounts are unusual, no provision is made for a special column for credits except in total. If any credits occur in any month they are written in the proper column in red ink, and the red ink items are added for the various subdivisions and extended into the total credit column.

Expense-Ledger Entries

In the illustration at hand, the first amount entered as a debit total is $85.13, which, as is indicated by the posting check, comes from the addition of the details given on page 105 of the voucher register—these details being $46.10 charged to laundry supplies, $30.50 charged to laundry fuel, $2.05 charged to laundry express, and $6.48 charged to laundry outside work. The voucher register is ordinarily so arranged, through the medium of special columns, as to show a total (footing) for each subdivision (of general-ledger account) that is likely to have direct charges—as, here, the four items shown above. Then the total for each subdivision may be posted from the voucher register directly to the expense ledger, as above, and the sum of the totals may be entered in the first column.

The items on the second line of this expense ledger are taken, as is indicated by the posting check, from the cash book; and the $245.75 is made up of $245 in salaries, and 75 cents paid for express.

The next line contains the general items, which are, with few exceptions, closing entries for distributing burden or overhead charges among the departments. In this case it is obvious that $17.10, originally charged to salaries of some other department, should be credited to that department and debited to the laundry, for the item comes not from the cash payroll, but from the journal; that $95 of board cost charged to Transfer Board is hereby transferred to the laundry; that $32 is cost for rooms for laundry employees, $12.60 is laundry cost for laundry employees, $20.25 is laundry fuel cost, $20.09 is the laundry share of general housing costs, $15.70 is interest on equipment, and $18.10 is depreciation.

The total of the items from each book, extended into the debit total column, indicates the amount chargeable in

FORM D

EXPENSE LEDGER

Laundry Department

Subdivision		Total		*Salaries*		*Board*		*Rooms*		*Laundry*	
Symbol		*DL*		*DLs*		*DLb*		*DLr*		*DLl*	
Source		Dr.	Cr.	Dr.	Tot.	Dr.	Tot.	Dr.	Tot.	Dr.	Tot.
Sundries	*VR 105*	*$85.13*									
Cash	*CB 98*	*245.75*		*$245.00*							
Sundries	*J 92*	*230.84*	*$1.49*	*17.10*		*$95.00*		*$32.00*		*$12.60*	
Jan. Totals	*L 53*	*$561.72*	*$1.49*		*$262.10*		*$95.00*		*$32.00*		*$12.60*
Sundries	*VR 112*	*$85.50*									
Cash	*CB 103*	*250.00*		*$240.00*							
Sundries	*J 96*	*189.45*				*$91.40*		*$32.00*		*$12.45*	
Feb. Totals	*L 53*	*$524.95*			*240.00*		*91.40*		*32.00*		*12.45*

[*Continued on next page*]

[*Form D—continued*]

Gen'l Suppl.		*Fuel*		*Express*		*Housing*		*Interest*		*Depreciation*		*Outside Work*	
DLmz		*DLmf*		*DLf*		*DLh*		*DLi*		*DLx*		*DLo*	
Dr.	Tot.	Dr.	Tot.	Dr.	Tot.	Dr.	Tot.	Dr.	Tot.	Dr.	Tot.	Dr.	Tot.
$46.10		$30.50		$2.05								$6.48	
				.75									
1.49		20.25				$20.09		$15.70		$18.10			
	$44.61		$50.75		$2.80		$20.09		$15.70		$18.10		$6.48
$57.10		$28.40											
5.50		4.50											
						$19.80		$15.70		$18.10			
	62.60		32.90				19.80		15.70		18.10		

the general ledger to the laundry department as a whole. The credit of $1.49 is obviously a credit to general supplies which have been transferred from the laundry department to some other. (The detail is shown, of course, in the journal.) Of course the cross footing of the eleven subdivision totals should equal the vertical footing of the general total. This total is posted hence to the general ledger. It is unnecessary to enter in the first column the total of items from each book, for the sum of the footings of all the other columns will give the total figure; but the method shown is a check on error.

The total of each subdivision is extended, it will be observed, into the total column for that subdivision; and the total debit of all subdivisions, as already noted, is entered in the first of the pair of columns headed "Total," whence it is posted to the general ledger (here page 53). It will be noticed, however, that under the "debit" column in each pair of columns for the subdivisions, but not under the column marked "total" in each pair, a double red line is ruled at the end of each month. This double red line indicates that addition will not proceed farther in that column; but since there are no double rulings in the "total" column of the subdivisions, the total may be made continuous until the closing of the books at the end of the half year or year. Under the debit column in the total group (which is the first pair of columns) the double ruling is provided; for this figure is not continuous; but since it is shown in the general ledger and will appear upon the monthly trial balance, the cumulative figure for the department as a whole may be found at any time.

Expense-Ledger Results

The ultimate result of this arrangement is that details are posted from the voucher register, from the cash book,

and from the journal, to the subdivision accounts in the expense ledger; that these subdivision accounts are kept both monthly and cumulatively until the end of the half year or year; that the total for the department, which must agree with the total of the subdivisions of the department for any month, is carried monthly to the general ledger, whence it is taken in total and carried to the trial balance: so that we have a statement of condition at the end of each month; that, if we wish to compare individual months, we have the total for each month, both for the subdivisions and for the department as a whole, in the expense ledger; and if we wish the total of any subdivision for any number of months, we get it from the footing (naturally taken each month for test purposes) of the total column of that subdivision. In the end, therefore, we have the total of each subdivision and of the department as a whole for each month, for any number of months, and for the half year or year as a whole.

List of Forms for Details of Cost Determination

The following forms are presented and discussed in the present chapter:

Form

1 Registry Book

2 Daily Patient Ward Report (from nurse in charge)

3 Ward Record (kept by nurse in charge, and checked monthly with Patient Summary)

4 Monthly Patient Summary, all wards (from Daily Patient Ward Reports—Form 2)

4a Annual Patient Summary (from Monthly Patient Summaries—Form 4)

5 Monthly Discharge and Death Record (from Daily Patient Ward Reports—Form 2—and Registry Book—Form 1)

Form

5a Annual Discharge and Death Record (from Monthly Discharge and Death Record—Form 5)

6 Monthly Patient Report (for trustees, from Monthly Patient Summary—Form 4—and Monthly Discharge and Death Record—Form 5)

6a Annual Patient Report (for trustees, from Annual Patient Summary—Form 4a—and Annual Discharge and Death Record—Form 5a)

7 Time Sheet

7x Time Sheet Appendix (for employees whose time is divided)

8 House Tables Requisition (from Time Sheet—Form 7—made out in office and sent to housekeeper or dietitian)

9 Ward Diet Requisition (made out by nurses and sent to dietitian)

10 Summary Patient Diet Requisition (made out by dietitian from Ward Diet Requisitions—Form 9—and sent to housekeeper)

11 Requisition on the Steward's Department (based on House Tables Requisition—Form 8—and Summary Patient Diet Requisition—Form 10—and made out by the housekeeper)

12w Weekly Dietary Summary (from House Tables Requisitions—Form 8—and Summary Patient Diet Requisitions—Form 10)

12 Monthly Dietary Summary (similar to 12w, but adding the last three days and combining the weeks)

13 Calculation of Special Food Costs (from Requisitions on Steward's Department—Form 11—and purchase records of prices of food)

14w Weekly Summary of Special Food Costs (from

Form

Calculations of Special Food Costs—Form 13—and Weekly Dietary Summary—Form 12w)

14 Monthly Summary of Special Food Costs (similar to 14w, but adding the last three days and combining the weeks)

15 Calculation of Occasional Common Food Costs (from Requisitions on Steward's Department—Form 11—and purchase records of prices of food)

16w Weekly Summary of Occasional Common Food Costs (from Calculations of Occasional Common Food Costs—Form 15—and Weekly Dietary Summary—Form 12w)

16 Monthly Summary of Occasional Common Food Costs (similar to 16w, but adding the last three days and combining the weeks)

17 Calculation of Regular Common Food Costs (from inventories, purchase records, and Monthly Dietary Summary—Form 12)

18 Summary of Average Food Costs (from Summary of Special Food Costs—Form 14—Summary of Occasional Common Food Costs—Form 16—and Calculation of Regular Common Food Costs—Form 17—and Monthly Dietary Summary—Form 12)

19 House Tables Record (from Time Sheet—Form 7)

20 Distribution of Food Costs (from Summary of Average Food Costs—Form 18—Monthly Patient Summary—Form 4—and House Tables Record—Form 19)

21 Engineer's Daily Time Card

22 Engineer's Monthly Summary

23 Space-Cost Basis

24 Space-Cost Distribution

25 Monthly Record of Ice

Form 1—Registry Book

On the Registry Book attempt is made to give all the information, other than medical, which it is desirable to keep for any one of four purposes: first, identification of the patient; second, financial responsibility; third, general statistical information, including that which will enable one to determine the costs of service; fourth, physical condition of the patient at discharge.

Each patient on entrance is given a number, as shown in the first column. This number is not repeated, even though the patient returns later; but the fact of return may be shown by an additional memorandum, after the name of the patient, showing the number given to the patient on his first arrival and any subsequent number given him on returns prior to this. The column headed "Notify" contains the name of the person who is to be informed in case of emergency. The next column indicates the person financially responsible for the payment of charges, or, if the name is in parenthesis, recommending credit. The next five columns contain records requiring no comment, but they should be filled accurately, so that statistics regarding the social and economic standing of patients may be available. The record of ward, or room, is of importance not merely as a guide in finding the patient, but as an indication of the department of the institution chargeable with the costs of board, etc. In the column for the date of entry the small number at the right and above the date indicates the time of entry (that is, the last meal served before entry). If the same plan is followed after the date of discharge, the difference in dates indicates the total number of days' board, with any fractions of days, chargeable to the patient. This is important for statistical purposes even if it is not used in determining charges to the patient; for example, if the number in the column headed "Total days" is 21^1, it indi-

FORM I [left-hand page

REGISTRY BOOK

No.	Name	Address	Notify	(Vouched for by) Send Bill to
249	*Ida L. Jones*	*27 Gray*	*Jas. H. Jones*	*ibid.*

right-hand page] REGISTRY BOOK (Continued)

Nativity	Occupation	Sex	Marital State	Age	Ward or Room	Rate	Date of Entry	Date of Discharge	Total Days	Condition on Discharge
English	*Seamstress*	*F*	*Single*	*26*	*Med. A.*	*$10.50*	*Jan. 2*[1]	*Jan. 23*[2]	*21*[1]	*Cured*

(The small numbers indicate times of day, or meals. The patient entered after breakfast and left before the evening meal.)

cates sixty-four meals served—twenty-one days and one meal over.

Form 2—Daily Patient Ward Report

Form 2 is a daily report for a ward, and contains all information necessary for the calculations of daily costs and for the completion of the registry record. Since it is to be made out daily, the number admitted, the number

FORM 2

Day, *January 2, 1912*

DAILY *Med. A* WARD PATIENT REPORT

Number of patients, morning	*28*
Number admitted	*1*
Number under treatment	*29*
Number discharged	*0*
Number died	*1*
Number remaining, evening	*28*
Special diet days *	*1*[2]
House diet days *	*25*
Fever diet days *	*1*
Total diet days *	*27*[2]

DISCHARGES

Registry numbers of individual patients			
Cured	Improved	Not Improved	Died
			147

*In days and thirds of days (meals).

discharged, and the number died, should be always the number since the report of the preceding day. The second part of this report shows the number of patients in each of the main classes of diet. This figure is used in the distribution of food costs. The last part of the report gives the condition of patients leaving. It gives not the number of patients, but the registry number of each patient, discharged as cured, improved, not improved, died. This report should be sent by the head nurse in each ward to the office at a specified hour daily, and should cover preferably figures until midnight of the preceding day.

Form 3—Ward Record

This form is virtually a duplicate of form 2, but it contains the record for all the days of the month on the same sheet, and it should be kept in the ward. At the end of each month, the nurse in charge of each ward should send to the office the final figure for the month on a daily patient report blank (form 2) with the word "daily" changed to "monthly." The office will then have means of comparing its own figures for the summary of all wards with the total of the summaries kept by the head nurses, and, therefore, will see that the monthly ward record kept by the nurse of each ward is kept accurately. Only thus is it possible to know that no discrepancies creep in between the nurses' daily reports and the office monthly report.

The only difference between form 3 and form 2, except for the larger content, is the provision for avoidance of duplication in the total number of patients in the last column. The number of patients at the beginning, of course, should be not the sum of the number of patients for each day, but only the number of patients on the morning of the first day. The number under treatment should be not the sum of the numbers under treatment for all days, but may

FORM 3

Month, *January, 1912*

Medical A WARD RECORD

Days of month	1	2	3	4	5	6	7	8	etc., etc.	Month
Number of patients, morning	27	28	28							27†
Number admitted	3	1	0							64
Under treatment	30	29	28							(34‡)
Number discharged	2	0	3							65
Number died	0	1	0							1
Number remaining, evening	28	28	25							25§
Special diet days *	2	1[2]	2[1]							66
House diet days *	24[1]	25	25[1]							874[2]
Fever diet days *	3	2	1[2]							96[2]
Total diet days *	29[1]	28[2]	29[1]							1,037[1]

*In days, and thirds of days (meals). †First day only. ‡Average. §Last day only.

be the average of such numbers. The number remaining at the end of the month is not the sum of the numbers remaining each day, but the number remaining on the evening of the last day. On the other hand, the sum of the number under treatment for all days must agree, except for the fractions of days, with the total diet days as shown in the second portion of the record. So far as there is any overlapping of fractions, there will be a slight discrepancy; for the purpose of the figure in the first half of the record is to show the average use of the ward by patients (indicating how nearly it is used to full capacity), while the purpose in the second half of the record is to get statistical figures for the distribution of food costs.

Form 4—Monthly Patient Summary

This summary is made up in the office, and consists principally of a total of the daily ward reports of the month. If all the monthly ward reports, made by the head nurse in each ward, were added together, as they should be for test purposes, the result would be for each day the figure shown here. The figures for the month, on the other hand, are not just the sums of the daily figures; for, as indicated in the comment on form 3, the number in the hospital at the beginning, the number under treatment, and the number in the hospital at the close, should not be totals. For this summary it is desirable to show the number of different persons under treatment, as the sum of the two preceding items (not the sum of all the days on that line). It is desirable also to show the average number under treatment; this will be not only the average of the figures of the line above on this summary report, but also (allowing for a slight variation because of dropped or taken fractions) an average of the similar items on the ward records. A com-

FORM 4 — MONTH OF *January, 1912*

MONTHLY PATIENT SUMMARY, ALL WARDS

Days of Month	1	2	3	4 etc., etc.	Month
Number in the hospital, morning	127	128	128		127*
Number admitted	3	1	0		164
Under treatment	130	129	128		291†
Average number under treatment					(129‡)
Number discharged	2	0	3		165
Number died	0	1	0		1
Number in the hospital, evening	128	128	125		125§
Special diet days ‖	22	21[2]	20[1]		606
House diet days ‖	94[1]	95	95[1]		2,774[2]
Fever diet days ‖	13	12	11[2]		306[2]
Total diet days ‖	129[1]	128[2]	127[1]		3,687[1]
Total number of meals					11,062

[*Continued on next page*]

[*Form 4—Continued*]

Largest number under treatment any day	*130*
Duration of that number, days	*21*
Smallest number under treatment any day	*127*
Duration of that number, days	*7*

DISTRIBUTION

Diet Days	Wards	Private Rooms	Total
Special		*606*	*606*
House	*2,680*[2]	*94*	*2,774*[2]
Fever	*261*[2]	*45*	*306*[2]
Total	*2,942*[1]	*745*	*3,687*[1]

* First day only.
§ Last day only.
† Sum of two lines above.
‡ Average of daily figures for the line above.
|| In days and thirds of days (or meals).

parison of the two calculations will serve as a check on error.

The last item on the first part of this summary, total number of meals, is new, and is obtained by multiplying the total diet days by three. It gives the total number of meals served during the month, and is required in order to make possible the proper distribution of food costs for articles which are common not only to all diets but also to all meals—such as flour, butter, sugar, milk, etc. Another new item on this summary is the "largest number under treatment any day." This shows how largely in any day the institution was run at full capacity. Since, however, this figure might misrepresent the facts by putting undue emphasis upon a large number, a supplementary statement, "duration of that number," should show whether it was mere chance or is more or less frequent. Similarly, the "smallest number under treatment any day" indicates the minimum use of the plant, and the supplementary statement, "duration of that number," indicates whether the condition is normal or extreme. On this summary is also added the distribution of diet days between wards and private rooms. The figures are taken from the daily ward reports, of course; for the office knows for each report whether the ward or room named falls within one or the other category. These figures are important in determining our costs for patients in wards as compared with those for patients in private rooms.

Form 4a—Annual Patient Summary

This is identical in purpose, and to a great extent identical in form, with form 4. It gives a summary for the year, and substitutes monthly for daily figures and an annual for a monthly total or average.

FORM 4A

YEAR_____

ANNUAL PATIENT SUMMARY

Months	Jan.	Feb.	Mar.	Apr.	May	Etc.	Year
Number in the hospital, first day							*
Number admitted							
Under treatment							†
Average under treatment							(‡)
Number discharged							
Number died							
Number in the hospital, last day							§
Special diet, days ‖							
House diet, days ‖							
Fever diet, days ‖							
Total diet, days ‖							
Total number of meals							

Largest number under treatment any day _____
Duration of that number, days _____
Smallest number under treatment any day _____
Duration of that number, days _____

DISTRIBUTION

Diet Days	Wards	Private Rooms	Total
Special			
House			
Fever			
Total			

* First day of year only. † Sum of two lines above. ‡ Average of monthly figures for the line above.
§ Last day of year only. ‖ In days and thirds of days (or meals).

Form 5—Monthly Discharge and Death Record

Since the monthly discharge and death record should be kept with great accuracy, not only for statistical purposes but because of the fact that it deals with persons and not with things, it may well appear on a separate statement rather than as a part of the Monthly Patient Summary.* It is desirable, moreover, to know, in addition to the individual discharge and the condition at discharge, the number of days for which the individual was in residence at the hospital; for if the hospital is one of last resort its proportion of deaths will be high, and the fact that it is of last resort will be somewhat indicated by the fact that the average time of residence within the hospital is short. For each class of patients discharged (cured, improved, not improved, died), therefore, there should be a record of the individual registry numbers of the patients, and the number of days of residence; to these figures should be appended the totals, so that the check on error or omission will be complete. To this general statement should be added three statistical items—the longest stay for any patient discharged during the month (which may be easily learned by running through the days shown under each group); the condition of that patient at discharge; and the average stay of all patients discharged during the month (which is found by dividing the total days by the total number of patients). The average stay for each group can be shown easily if desired; but in the forms used here it is shown on the annual record only, and is deemed hardly valuable for the monthly record unless peculiar circumstances have arisen.

* In some institutions a discharge number is given every patient and recorded on a form consisting of two columns only—the first giving the entry number and the second the discharge number. Entry is made only when a patient leaves or dies. The difference between the last entry number on the Registry Book and the last discharge number on the Discharge Book is the number of patients in the hospital. This is a good check on error, but serves no other purpose.

FORM 5

MONTHLY DISCHARGE AND DEATH RECORD

MONTH OF *January, 1912*

Day	Patients Cured		Patients Improved		Patients Not Improved		Patients Died		Total Patients	Total Days
	Patient Number	Days in Hospital	Patient Number	Days in Hospital	Patient Number	Days in Hospital	Patient Number	Days in Hospital		
1	*157* *143*	*21* *25*							*2*	*46*
2							*147*	*23*	*1*	*23*
3	*142* *159* *173*	*27* *23* *19*							*3*	*69*
4 etc. etc. etc.										
Patients total Days total	*122*	 *2,463*	*23*	 *869*	*20*	 *629*	*1*	 *23*	*166*	 *3,984*

Average stay of patients discharged during the month $\frac{3,984}{166} = 24$

Longest stay for any patient discharged during the month *27 (cured)*

FORM 5A

ANNUAL DISCHARGE AND DEATH RECORD

YEAR, *1912*

Month	Patients Cured		Patients Improved		Patients Not Improved		Patients Died		Total Patients	Total Days
	Number	Days	Number	Days	Number	Days	Number	Days		
January	*122*	*2,463*	*23*	*869*	*20*	*629*	*1*	*23*	*166*	*3,984*
February										
March										
etc.										
etc.										
Patients total	*1,221*		*220*		*190*		*14*		*1,645*	
Days total		*25,613*		*8,521*		*6,041*		*148*		*40,323*
Average stay		*21*		*39*		*32*		*11*		*24*

Longest stay for any patient discharged during the year *75* (*improved*).

Form 5a—Annual Discharge and Death Record

Form 5a is similar to form 5, but substitutes months for days, and gives the average stay by groups (cured, improved, not improved, died). (See opposite page.)

Form 6—Monthly Patient Report

The superintendent of the hospital should make to the trustees or governing board a monthly report containing a summary of those items concerning which the board will desire information; but this report should be brief and therefore should not contain quite so much information as the superintendent will require for his own guidance. This form is intended to suggest the desirable information. All the figures recorded here are obtainable from reports and records already discussed. (See page 130.)

Form 6a—Annual Patient Report

This is practically identical with form 6; it differs only in substituting annual for monthly figures. (See page 131.)

Form 7—Time Sheet [Illustrated on page 132.]

In attempting to divide the cost of board, room, laundry, etc., for employees among the various departments which they serve, it is necessary to have complete information with regard to their assignments. This form is intended to suggest how such information may be kept in connection with the ordinary calculation of payroll, and without much labor beyond that required for the simplest form of payroll. The first column (beyond the name) shows the type of table board served to each employee, and indicates therefore which of the various rates of board is to be used in charging the department served by the employee. The second column indicates the specific board account chargeable for this employee's board—that is, which departmental board account is so chargeable. All the other columns but

FORM 6

MONTHLY PATIENT REPORT

MONTH OF *January, 1912.*

	Medical Ward	Surgical Ward	Private Ward	Total
Number in the hospital, beginning of month	27	60	40	127
Number admitted during the month	24	75	65	164
Number treated during the month	51	135	105	291
Number discharged (*165*) and died (*1*) in month	26	70	70	166
Number in hospital, end of month	25	65	35	125
Capacity (beds) unoccupied	2	1	4	7

Patient days: special diet, *606;* house diet, *2,774*[2]*;* fever diet, *306*[2]*;* total, *3,687*[1]

Maximum number of patients at any time during the month	130
Number of days that maximum occurred	21
Minimum number of patients at any time during the month	127
Number of days that minimum occurred	7
Average number of patients during the month	129
Longest stay of patient discharged during the month	27
Average stay of patients discharged during the month	24

Condition of patients discharged during the month

Cured	122
Improved	23
Not improved	20
Total	165

FORM 6A

YEAR_____

ANNUAL PATIENT REPORT

	Medical Ward	Surgical Ward	Private Rooms	Total
Number in the hospital, beginning of the year Number admitted during the year				
Number treated during the year Number discharged (____) and died (____) in year				
Number in hospital, end of year Capacity (beds) unoccupied				

Patient days: special diet, ____; house diet, ____; fever diet, ____; total ____

Maximum number of patients at any time during the year
  Number of days that maximum occurred
Minimum number of patients at any time during the year
  Number of days that minimum occurred
Average number of patients during the year
Longest stay of patient discharged during the year
Average stay of patients discharged during the year
Condition of patients discharged during the year
  Cured
  Improved
  Not improved

  Total

FORM 7

TIME SHEET

MONTH OF *January, 1912*

Name	Table Group	Board Acct.	Days						Time	Rate	Wages Acct.	Amount	Group Total
			1	2	3	4	5	etc., etc., etc.					
A. J. Peterson	*B*	*ASb*	*1*	*1*	*1*	*1*	*1*		*31ds*	*125 mo.*	*ASs*	*125.00*	
M. A. Hollis	*B*	*ASb*	*1*	*1*	*1*	*1*	*1*		*31*	*100 "*	*ASs*	*100.00*	
*Divided **	*B*	*ASb*							*15²*	*100 "*	*ASs*	*50.00*	
Group Total	*B*	*ASb*							*77²*		*ASs*		*275.00*
*Divided **	*B*	*ATb*							*15²*		*ATs*	*50.00*	*50.00*

* From form 7x.

So far as possible, items pertaining to the same account should be placed together, so that totals may be easily found. Items to be apportioned between two or more departments or accounts should be entered on form 7x and here only in totals.

one are of the usual type for a time sheet. The exception, which is headed "wages account," indicates the account chargeable for the wages alone—that is, which departmental wages account is chargeable. These columns are disposed on the sheet in this fashion because the charge to a wage account will be determined by the amount shown on the time sheet, and therefore the two columns should be in close proximity; but the board account is more closely associated with the name of the individual than with the amount of the wages, and hence is given first. The group-total time is then shown in close proximity to both the board account and the wages account, for no intervening items occur. (See page 132.)

In case the board and wages of any individual are divided between two departments, or two subdivisions of a department, the amount should not appear upon this sheet, but should be entered on a separate sheet, form 7x. The totals of form 7x, however, should be transferred to this sheet, so that this sheet may be complete for departments and subdivisions of departments, even though it is not complete for all individuals. To put the subdivisions for individuals on such a sheet as this would unnecessarily either cumber this sheet or split wages for individuals between several departments. Under this plan of a special divided time sheet, all the items for any department, and for any person whose work is not divided, are in one place, namely, the time sheet; and all items for the wages of any individual whose time is divided are in one place, namely, the time sheet appendix.

Form 7x—Time Sheet Appendix

The purpose of this form has been indicated in the discussion of form 7. In the main, the detailed working out is suggested by the form itself; but one should observe

that if any board account (and, of course, the corresponding wages account) occurs more than once, the times and amounts indicated should be added together to produce a total for transfer to form 7; for the purpose of 7x is to gather, on the basis of board accounts and wages accounts, the items which are on the upper half of 7x scattered in connection with the time of various individuals. In other words, since the unit of this sheet is the employee, and the employees cannot here be classified upon the basis of the departments which they serve, the data referring to each department must be picked out and combined in the summary shown in the lower half of the form. On this summary, it will be observed, the first two board accounts to be debited (ASb and ATb) have only one item each; the next (DKb) is charged in part from the record of P. Jones and in part from the record of S. Brown; the next comes in part from Jones's record and in part from Brown's; the next is a part of Jones's only; and the last is a part of Smith's only. The wages items are similarly determined. Because of the possibility of carelessness in summarizing the details of the upper half of the sheet, the totals to be transferred to form 7 should be proved by comparison with those for the first half of the sheet. Since total time shown on the summary should agree with the total time shown in detail for the individuals, a comparison is readily made; the total amount of wages shown on the summary should agree both with the sum of all the individual items of wages shown on the first half of the statement and with the sum of the totals shown on the first half of the statement. Thus there is a check on time and a double check on amounts.

On all forms emphasis should be laid upon the importance of checking all additions by comparing group totals with individual totals, and, where opportunity is afforded, of comparing cross additions with vertical additions.

FORM 7X

MONTH OF *January, 1912*

TIME SHEET APPENDIX

Name	Table Group	Board Acct.	Share	Days 1	2	3	4	etc., etc.	Time	Rate	Wages Acct.	Amount	Total
Jos. Smith	*B*	*ASb*	½	*1*	*1*	*1*	*1*		15^2	*100*	*ASs*	*50.00*	*100.00*
		ATb	½						15^2		*ATs*	*50.00*	
		DKb	⅓	*1*	*1*	*1*	*1*		10^1	*45*	*DKs*	*15.00*	
P. Jones	*C*	*DHb*	⅓						10^1		*DHs*	*15.00*	*45.00*
		DLb	⅓						10^1		*DLs*	*15.00*	
		DKb	⅓	*1*	*1*	*1*	*1*		10^1	*39*	*DKs*	*13.00*	
S. Brown	*C*	*DHb*	⅓						10^1		*DHs*	*13.00*	*39.00*
		DSb	⅓						10^1		*DSs*	*13.00*	
									93^1			*184.00*	*184.00*
Summary, trans	*ferred to*	*form 7:*											
	B	*ASb*							15^2		*ASs*	*50.00*	
	B	*ATb*							15^2		*ATs*	*50.00*	
	C	*DKb*							20^2		*DKs*	*28.00*	
	C	*DHb*							20^2		*DHs*	*28.00*	
	C	*DLb*							10^1		*DLs*	*15.00*	
	C	*DSb*							10^1		*DSs*	*13.00*	
									93^1			*184.00*	

Form 8—House Tables Requisition

The table manager in any institution must know for how many persons he is providing, and therefore the office should notify him for each meal of the number of persons to be served in each group of board. In small institutions with a constant staff this notification need be sent only when changes occur; and in very large institutions, where a difference of two or three persons is negligible, notification would be sent only when important or cumulative changes have occurred.

FORM 8 Meal *Br.* Date *Jan. 2, 1912*

HOUSE TABLES REQUISITION

Group A	*11*
Group B	*39*
Group C	*28*
Total	*78*

Form 9—Ward Diet Requisition

Wherever foods of a special type are required, the head nurse in each ward must make a requisition specifying the number of services of special diets (where the type of diet is prescribed) and the special dishes (where the diet is individual). This form is to be sent to the office, or directly to the table manager, for each meal.

The illustration of this form will be found, parallel with its counterpart, form 10, on page 137. The latter is similar, except for its greater content, for it summarizes the figures of requisition for all wards.

FORM 9 Meal *Br.* Date *Jan. 2, 1912*

SURGICAL WARD DIET REQUISITION

	Number Each Special Dish	Total
Special diet *A*		*9*
Special dishes		
Omelet	*4*	
Chops	*3*	
House diet		*12*
Fever diet		*2*
Special dishes		
Total meals		*23*

FORM 10 Meal *Br.* Date *Jan. 2, 1912*

SUMMARY PATIENT DIET REQUISITION, ALL WARDS

	Number Each Special Dish	Total
Special diet		*23*
Special dishes		
Omelet	*6*	
Chops	*9*	
House diet		*90*
Fever diet		*15*
Special dishes		
Total meals		*128*

Form 10—Summary Patient Diet Requisition

The information contained in form 9 from the various wards should be summarized on a similar form for the table manager. The original of form 9 should then be sent to the serving department for guidance in the distribution of food prepared. (See preceding page.)

Form 11—Requisition on the Steward's Department

If one is to determine accurately food costs, one must know not only how much food of each type goes into each dietary, but also at what cost. Someone must know what is to be withdrawn from stores for each type of dietary; and to preserve these figures in the form of a well-arranged requisition on the steward's department requires no additional labor. Those foods used in one type of dietary only are extended into the appropriate columns for that dietary: the amount for which requisition is made should be extended in the column marked "issued," the amount returned (if any) after the meal has been prepared should be extended in the column marked "returned," and the amount consumed should appear as "net." Amounts called for in excess of the amounts actually used must always be returned to the store-room and entered upon this requisition sheet. Otherwise there is great danger of loss, or misplacement, or failure to account for supplies used. If any articles of diet are common to two or more types of dietary, indication of that fact should be made on the requisition; but it is not necessary to divide the total into the amounts required in each dietary, for since such items are to be distributed among the types of dietary monthly on a calculated basis, they may be kept together and charged to the common dietary until the monthly figures have been obtained. Such common participation in any foods is in-

dicated on the form by lines extending from the figures through the columns for the dietaries concerned. As indicated on the blank, Dietary A, in this particular classification, comprises special diet and the highest class of table board for employees, such as that for the superintendent, the resident physicians, and head nurses. Dietary B comprises the general house diet served in wards, and the diet for nurses, orderlies, and other employees above the servant class. Dietary C comprises the diet served to employees of the servant class. Dietary D comprises fever diet only. These subdivisions vary, of course, both in number and content, between institutions.

In many institutions food is ordered from the steward's department daily. This simplifies ordering, but it leaves open greater likelihood that food ordered for one dietary shall be used in another without credit. The form shown here allows credits by entries in the columns headed "returned," with corresponding debits in the columns headed "issued," for the dietaries taking the unused foods.

The form which follows is not intended to displace the common form of requisition for open-stock foods. Spices, flour, sugar, cereals, tea, coffee, etc., are not usually ordered from the steward's department for single meals or days, of course, but in convenient quantities for use in the kitchen as occasion arises; and they are for use usually in all classes of dietary. They may well be ordered on separate requisition slips, known as open-stock requisitions (possibly designated form 110); they would not, however, enter into the cost calculations, except for checking purposes, for the cost of such open-stock foods is to be learned from inventories checked by the open-stock requisitions. This form 110 should have printed upon it the name of all such common open-stock foods; but since returns are not common, only one column for amounts is necessary.

FORM II

Meal *Dinner* Date *January 5, 1912*

REQUISITION ON THE STEWARD'S DEPARTMENT

	Dietary A*			Dietary B*			Dietary C*			Dietary D*		
	Issued	Returned	Net	Issued	Returned	Net	Issued	Returned	Net	Issued	Returned	Net
Meats												
Beef				60	10	50	10	1	9			
Lamb												
Chicken	30	5	25									
etc.												
Vegetables, fresh												
Potato				—25	5	20—						
Squash				—20	0	20—						
Beets												
Celery	10	0	10									
etc.												
Vegetables, canned												
Tomato												
etc.												
Fruits, fresh												
Oranges	5											
etc.												
Fruits, dried												
Prunes				—20	0	20—						
etc.												
Milk				—15	1	14—				5	1	4
Tea												
etc.												

* Dietary A comprises Special diet and House tables group A.
" B " House " " " " " B.
" C " only " " " C.
" D " Fever "

(The names of all common foods should be printed, and these blanks should be of inexpensive paper.)

Forms 12w and 12—Dietary Summaries Weekly and Monthly

It is necessary in distributing food costs at the end of any week, month, or year, to know the total number of meals served in each class of dietary; for only when this is done can distribution be made between the various types of patients and the various departments having employees. The monthly dietary summary should therefore show exactly or approximately for each meal of each day the number of persons in each class of dietary. These figures are obtained readily from form 10 (the summary of the patient diet requisition made out from the head nurses' meal slips) and from form 8 (which is the office statement of the number of employees to be given each type of dietary). Since a sheet for a whole month would be too bulky, four weekly sheets and a summary sheet adding the extra days are recommended.

As a means of determining average costs for employees and for patients as well as per capita, it is necessary to know not only the grand total but how many of the people served are patients and how many are employees; therefore on the last line of form 12 is given the total number of days' board for employees—which, of course, is the total of the columns headed "A house," "B house," and "C house." The figures are repeated for clearness. For checking purposes, the number of meals is divided by three to give the total days. The total days here shown for patients classified by dietary should agree with the total days reported on form 4 for the corresponding groups. A slight discrepancy might arise from the conversion of fractions, however. The total days for employees should agree with the total shown by form 7. On all forms, as already suggested, totals should be taken not only vertically but horizontally in order that there may be perfect correctness of

FORM 12W

Month of *January, 1912*
Week *1–7*

WEEKLY DIETARY SUMMARY

Dietary		A			B			C	D	Grand Total
Day	Meal	Patient *	House†	Total	Patient *	House†	Total	House†	Patient *	
1	Br									
	Dn									
	Sp									
2	Br	*23*	*11*	*34*	*90*	*39*	*129*	*28*	*15*	*206*
	Dn									
	Sp									
3	Br									
	Dn									
	Sp									
4	Br									
	Dn									
	Sp									
5	Br									
	Dn									
	Sp									
6	Br									
	Dn									
	Sp									
7	Br									
	Dn									
	Sp									
Total meals										
Total days										

* From form 10. †From form 8.

FORM 12

MONTHLY DIETARY SUMMARY

Month of *January, 1912*

Dietary	A			B			C	D	Grand Total
Day Meal	Patient *	House†	Total	Patient *	House†	Total	House†	Patient *	
29 Breakfast									
Dinner									
Supper									
30 Breakfast									
Dinner									
Supper									
31 Breakfast									
Dinner									
Supper									
1– 7									
8–14									
15–21									
22–28									
Total meals	*1,818*	*1,005*	*2,823*	*8,324*	*3,061*	*11,385*	*2,451*	*920*	*17,579*
Total days	*606*	*335*	*941*	*2,774*[2]	*1,020*[1]	*3,795*	*817*	*306*[2]	*5,859*[2]
House days		*335*			*1,020*[1]		*817*		*2,172*[1]

Combination totals

A+B+C	= *16,659*	Grand total	= *17,579*
A+B	= *14,208*	D	= *920*
A+C	= *5,274*		
B+C	= *13,836*	A+B+C	= *16,659*
			3
	49,977 = Proof		= *49,977*

* From form 10. † From form 8.

figures. Here, for instance, on the monthly summary the grand total of meals served, 17,579, should be the sum not only of the figures above it in the column for grand total, but also the sum of the four group totals at the left on the same line, for each of these totals is the sum of a column of which the details go to make up the grand total.

Since later we shall need to know the sum of certain combinations of groups (for form 16), they are shown here at the bottom of form 12. Proof of correctness is found by subtracting D from the grand total (since it is not in any combination) and multiplying the difference by three (since each group is used three times).

Strong temptation occurs in most large institutions to say that two or three persons more or fewer make no difference in food costs and therefore need not be regarded in the figuring. Whether that is true or not, it is a fact that a slight inaccuracy known and neglected leads to a growing tolerance of inaccuracy, and usually results in inaccuracy that is, or should be, intolerable. An indefinite margin of inaccuracy usually results in worthless figures. For this reason, form 12w is carried out in detail for each meal rather than left with an approximate figure for each day. With a reasonable degree of accuracy, of course, the latter would serve for most purposes. Then form 12w and form 12 would be combined, with a line for each day.

Form 13—Calculation of Special Food Costs

The calculations of food cost may now begin with those foods entering into one diet only. We already have, on the summary patient diet requisition (form 10), and on the requisition on the steward's department (form 11), all items not open-stock entering into each dietary. If the items actually consumed in each class of dietary, and in that alone, are entered on a new form at the cost known to

FORM 13

Meal *Dinner* Date *January 2, 1912*

Calculation of Special Food Costs

(Incomplete sample)

Dietary (Form 11)	Price	A		B		C		D	
		Consumed	Amount	Consumed	Amount	Consumed	Amount	Consumed	Amount
Meats									
Chicken	.25	*25 lbs.*	*6.25*						
Beef	.15			*50 lbs.*	*7.50*				
Beef	.12					*9 lbs.*	*1.08*		
Vegetables, fresh									
Celery	.15	*10*	*1.50*						
Vegetables, canned									
Fruits, fresh									
Oranges	.60	*5/12 doz.*	*.25*						
Milk	.09							*4 qts.*	*.36*
Total			*8.00*		*7.50*		*1.08*		*.36*

the office, the sum of all such items will give the charge to each dietary for the special foods consumed. These items are figured for each meal. As a matter of fact, however, for most meals they are likely to be either few or entirely absent, for most food is either common to all dietaries or to several.

If the custom is to fill out form 11 (requisition on the steward's department) only daily, this form 13 will be a daily sheet, of course, and no attempt will be made to calculate on it for individual meals.

Forms 14w and 14—Summaries of Special Food Costs—Weekly and Monthly

To these forms are carried from form 13 the total costs of special food for the various dietaries for each meal, and from form 12w and form 12 the number of persons served. A total of these items, for each dietary, for the month, gives the total cost of special food and the total number of meals served for each dietary. A division of the former by the latter gives the average cost of food, for each type of dietary, for the foods peculiar to that dietary. These figures multiplied by three give the average daily cost.

Form 14w, like form 12w, is for the week, and form 14 combines the weeks and adds the extra days to make the month. The averages at the bottom of form 14w may be of service to enable the manager to watch his costs; but they are not used in the final books, for the monthly averages supplant them, as shown on form 14.

If the requisitions on the steward's department (form 11) are made out for a day at a time, form 13 becomes a calculation of daily food cost, and form 14w and form 14 may be combined; for, with only thirty-one items for any month, one sheet may cover it.

FORM 14W

Month of *January, 1912*
Week *1–7*

WEEKLY SUMMARY OF SPECIAL FOOD COSTS

Dietary	A	B	C	D
Day Meal	Cost (Form 13)	Cost (Form 13)	Cost (Form 13)	Cost (Form 13)
1 Breakfast				
Dinner				
Supper				
2 Breakfast				
Dinner	*8.00*	*7.50*	*1.08*	*.36*
Supper				
3 Breakfast				
Dinner				
Supper				
4 Breakfast				
Dinner				
Supper				
5 Breakfast				
Dinner				
Supper				
6 Breakfast				
Dinner				
Supper				
7 Breakfast				
Dinner				
Supper				
Total				
Meals served (Form 12w)				
Average, meal				
Average, day				

FORM 14 Month of *January, 1912*

MONTHLY SUMMARY OF SPECIAL FOOD COSTS

Dietary	A	B	C	D
Day Meal	Cost (Form 13)	Cost (Form 13)	Cost (Form 13)	Cost (Form 13)
29 Breakfast				
Dinner				
Supper				
30 Breakfast				
Dinner				
Supper				
31 Breakfast				
Dinner				
Supper				
1– 7				
8–14				
15–21				
22–28				
Total	*166.56*	*379.50*	*24.50*	*27.60*
Meals served (Form 12)	*2,823*	*11,385*	*2,451*	*920*
Average, meal	*.059*	*.033*	*.01*	*.03*
Average, day	*.177*	*.099*	*.03*	*.09*

Form 15—Calculation of Occasional Common Food Costs

The cost of foods common to two or more dietaries may be figured for each meal in a fashion similar to that used in finding the special food costs. On this form 15 should be entered, however, only items which, though common to several dietaries, are not common to all meals—such, for instance, as vegetables and fruits. The cost of foods common to all meals, of course, may be taken for longer periods and so simplify the labor of calculation. On this form, therefore, should be entered for any meal all

FORM 15

Meal *Dinner* Date *January 5, 1912*

CALCULATION OF OCCASIONAL COMMON FOOD COSTS
(Incomplete sample)

	Dietaries Served in Common (Form 11)								
	Price	A+B+C		A+B		A+C		B+C	
		Consumed	Amount	Consumed	Amount	Consumed	Amount	Consumed	Amount
Meats									
Vegetables, fresh									
Squash	.05	*20 lbs.*	*1.00*						
Potatoes	.02[2]	*20 lbs.*	*.50*						
Vegetables, canned									
Fruits, fresh									
Fruits, dried									
Prunes	.09	*20 lbs.*	*1.80*						
Milk	.09	*14 qts.*	*1.26*						
Total			*4.56*						

foods common to dietaries A, B, and C, common to A and B, common to A and C (rare), and common to B and C.

If ordering is for the day, rather than for the meal, the form would be the same as that shown, but with a larger content.

If, on the other hand, prices are constant, because supplies have been bought in advance, the labor of calculation may be much simplified by combining many meals in one calculation; e. g., all the items on the form shown as a sample below are likely to have been bought early in the season or by contract, and therefore calculation need not be made oftener than the figures are needed or the price changes. Meats, on the other hand, may need calculation for each purchase.

Indeed, if this form is made on a large sheet, with ample spaces vertically to add daily figures of quantities consumed in each combination of dietaries (so that to the 20 lbs. of squash used to-day, e. g., 15 lbs. may be added day after to-morrow, etc.) one sheet may serve for a week or longer. The objection to this method is the awkwardness of the sheet and the difficulty of making corrections in case of error—for, since the items cannot well be labeled, identification is well-nigh impossible. That is why a separate sheet for each meal or day is recommended here.

Forms 16w and 16—Summaries of Occasional Common Food Costs, Weekly and Monthly

These summarize the information given for each meal on form 15, but add from form 12 the total number of meals, for the month, served in each group of dietaries. Dividing the total cost by the number of meals gives the average cost per meal for these particular items; and multi-

FORM 16W

Month of *January, 1912*
Week of *1–7*

WEEKLY SUMMARY OF OCCASIONAL COMMON FOOD COSTS

Day	Meal	Cost of Food for Dietaries Served in Common				Total
		A+B+C	A+B	A+C	B+C	
1	Breakfast					
	Dinner	*4.56*				
	Supper		*3.50*		*2.15*	
2	Breakfast	*1.50*		*.85*	*1.88*	
	Dinner					
	Supper					
3	Breakfast					
	Dinner					
	Supper					
4	Breakfast					
	Dinner					
	Supper					
5	Breakfast					
	Dinner					
	Supper					
6	Breakfast					
	Dinner					
	Supper					
7	Breakfast					
	Dinner					
	Supper					
Totals						
Meals served (Form 12W)						
Average per meal						
Average per day						

FORM 16 Month of *January*, 1912

MONTHLY SUMMARY OF OCCASIONAL COMMON FOOD COSTS

Day	Meal	Cost of Food for Dietaries Served in Common				Total
		A+B+C	A+B	A+C	B+C	
29	Breakfast					
	Dinner					
	Supper					
30	Breakfast					
	Dinner					
	Supper					
31	Breakfast					
	Dinner					
	Supper					
1– 7						
8–14						
15–21						
22–28						
Totals		*575.30*	*189.70*	*61.15*	*177.51*	*1,003.66*
Meals served (Form 12)		*16,659*	*14,208*	*5,274*	*13,836*	
Average per meal		*.034*	*.013*	*.012*	*.013*	
Average per day		*.102*	*.039*	*.036*	*.039*	

plying this quotient by three gives the average cost per day for these particular items.

These forms are designed to follow the plan of a record and calculation of food cost for each meal. Where record and calculation are made only daily, these two forms would be combined, and form 16 would have thirty-one lines—one for each day. If, on the other hand, form 15 were arranged for a week's calculation, form 16 would have but four or five lines. If, finally, form 15 could be made to cover a

month (possible when the dietaries are few and combinations infrequent) form 15 would itself serve the purpose of form 16 by the mere addition of the figures for meals served and for averages.

Wherever averages are shown, as here, the figures from which they are derived should be shown—as a check on error in calculation or copying. So the number of meals served should be entered here from form 12, indicating that .034 is the decimal expression of the fraction 575-16659.

Form 17—Calculation of Regular Common Food Costs

A common type of food is that which is served, either directly or indirectly, for all meals and for all types of dietary—such as flour, sugar, butter, spices, milk, etc. If a proper stores record is kept of the amount on hand at the beginning of the month, the amount bought, and the amount on hand at the end of the month, the amount consumed can be easily determined, and this multiplied by the cost per unit gives the total cost for the month. If we divide this cost by the total number of meals served, indicated by form 12, we shall get the cost per meal; this multiplied by three gives the daily cost. This requires calculation but once a month.

Care should be taken, of course, to provide against confusion between open stock in the kitchens and store-room stock. If all food supplies go to the kitchens and are sent on requisition only, the store-room may be treated as an outside store. If, on the other hand, the store-room issues food to diet kitchens, dining-rooms, etc., direct, or without requisitions, either inventories of the store-room must be taken for each calculation of regular common foods, or requisitions from diet kitchens, dining-rooms, etc., must be carried through the cost calculations. In any case, store-room stock should be frequently checked with the purchases,

FORM 17 Month of *January, 1912*

CALCULATION OF REGULAR COMMON FOOD COSTS

(Incomplete Sample)

	On Hand Beginning	Bought	On Hand End	Consumed	Rate	Cost
Groceries						
Flour	*600*	*300*	*100*	*800*	*.03*	*24.00*
Sugar	*1,000*	—	*300*	*700*	*.05*	*35.00*
etc.						
Butter						
Eggs						
etc.						
etc.						*459.58*
Total						*518.58*

Number of meals (Form 12)	*17,579*
Cost per meal	*.0295*
Cost per day	*.09*

the requisitions, and the inventories. This last requirement is mere business sense, and its cost is not a cost of accounting—though the accountant uses the figures.

Form 18—Summary of Average Food Costs

The immediately preceding forms have given the cost per day for each type of dietary as follows: special foods, form 14; occasional common foods, form 16; and those common to all meals, form 17; if we now add together the costs, for each type of dietary, for each one of these types of food, we get the total daily cost for each dietary. The daily cost for patients in private rooms is the cost of

dietary A for the special foods, plus those occasional common costs which concern dietary A, plus the regular common cost. Patients in wards take dietary B for the special foods, and share in the other two classes of costs. Patients on fever diet are served class D special food, but do not usually share in the occasional common diet, though they may share in the regular common diet. Group A of the household is served diet A of the special foods and shares in the other two. Group B of the household is served class B of the special diet and shares in the other two. Group C of the household is served class C of the special food and shares in the other two. This form gathers the various elements of final food cost for each dietary and shows its final figure.

The lower half of this form gives us the statistical figures for the total cost of food, the total cost of patient food, and the division of the total cost of patient food between wards and private rooms. These figures are obtained as follows: the total cost of food is taken from form 14 (which gives the four types of special food), form 16 (which gives the occasional food), form 17 (which gives the regular food), and form 12 (which gives the total number of persons for whom board was provided). A division of the total cost by the number of persons gives the average cost of all food per capita day.

The cost of patient food is determined from the number of persons in each group of patients (form 12), and the total daily cost for that group as shown by the upper half of this form 18. The products of these figures give the cost of patient food for each class of patient, and the sum of the products gives the total cost of patient food. When this is divided by the total number of patients, as indicated in the form (also obtained from form 12), the quotient is the average cost of patient food per patient-day.

FORM 18

Month of *January, 1*

Summary of Average Food Costs per Day

	Special Foods (Form 14)	Common Occasional Foods (Form 16)				Common Regular (Form 17)	Total Daily Cost
		A B C	A B	A C	B C		
Special diet, patients, A	.18	.10	.04	.04	—	.09	.45
House diet, patients, B	.10	.10	.04	—	.04	.09	.37
Fever diet, patients, D	.09	—	—	—	—	.09	.18
Group A, household	.18	.10	.04	.04	—	.09	.45
Group B, household	.10	.10	.04	—	.04	.09	.37
Group C, household	.03	.10	—	.04	.04	.09	.30
Total *	.68	.50	.16	.12	.12	.54	2.12

*For proof purposes only.

Total Cost of Food

Special A (Form 14)	$166.56
Special B (Form 14)	379.50
Special C (Form 14)	24.50
Special D (Form 14)	27.60
Occasional (Form 16)	1,003.66
Regular (Form 17)	518.58
Total	†2,120.40

Total days (Form 12) 5,860

Average cost of all food per capita day

$$\frac{\$2,120}{5,860} = \$.362$$

Total cost of patient food

Special diet (Form 12)	606 × .45 =	$272.70
House diet (Form 12)	2,774[2] × .37	1,026.62
Fever diet (Form 12)	306[2] × .18	55.20
Totals	3,687[1]	1,354.52

Average cost of patient food per patient-day

$$\frac{\$1,354}{3,687} = \$.367$$

Division of total cost of patient food

	Wards		Private Rooms	
Special diet (Form 4)			606 × .45 =	272.70
House diet (Form 4)	2,680[2] × .37 =	991.84	94 × .37 =	34.78
Fever diet (Form 4)	261[2] × .18 =	47.10	45 × .18 =	8.10
Totals	2,942[1]	1,038.94	745	315.58
Average	$\frac{1,038.94}{2,942} = .353$		$\frac{315.58}{745} = .424$	

† This figure is for food actually consumed, and may be more or less than the cost of food bought during the period (the sum of the various DSm accounts). The allowance for inventories is discussed in connection with the closing entries for board costs.

If we multiply the number of patients in wards and the number in private rooms, as shown by form 4, by the cost for each type of dietary served, and divide for wards and for private rooms by the total number of patients in each, we shall get the average cost of patient food for wards and the average cost of patient food for private rooms. This is worked out on page 156.

Form 19—House Tables Record

This form is designed to supplement form 7, when the number of employees is large, and thus provide the means of final distribution of board costs among employees serving the various departments. As shown in the form, all employees whose board is chargeable to the same account are considered for the purpose of this schedule as constituting a group, and since the classification follows almost exactly the natural classification of the time sheet and the payroll, the first figures are at hand. The employees' time is further grouped so that we may have a final figure for those who have dietary A, for those who have dietary B, and for those who have dietary C. Each department employing any of those whose time is included in group A is of course to be charged with their board at the group A cost—which has already been shown on form 18. Each department employing any of those whose time is included in group B is to be charged at the group B rate. The same thing is true of group C. The totals are taken, for test purposes, in order to see whether they agree, as they should, with the figures on form 12. The application of the rate to the time here shown is made on form 20.

When groups of employees and of dietary are few, form 7, as shown, will in its group totals provide all necessary information; but when complications exist, or when the importance of proving figures is great, a summary like

FORM 19

Month of *January, 1912*

House Tables Record
(From form 7)

Service	Account	1	2	3	4	Etc., Etc.	Month
Administrative officer days	ASb	4[1]					120
Professional service days, physicians	PSbw	6[2]					152
Professional service days, superintending nurses	PSbz						43
Training-school teacher days	DTb						20
etc.							
etc.							
Total group A days		11					335
Administrative employee days	ASb	4					75
Telephone service days	ATb	1					30
Professional service days, nurses in private ward	PSbp	2[1]					171[2]
Professional service days, nurses, general	PSbz	31					743[2]
Dispensary employee days	PDb						
Emergency employee days	PEb						
etc.							
etc.							
Total group B days		38[1]					1,020[1]
Steward's employee days	DSb	3[1]					89[2]
Kitchen employee days	DKb	6[2]					309
Household employee days	DHb	5					152[1]
Laundry employee days	DLb	8					155[2]
Boiler room employee days	HSb	4[2]					110[1]
etc.							
etc.							
Total group C days		27[2]					817
Total of all groups		77					2,172[1] *

* This total should agree with the sum of the three House columns on the Monthly Dietary Summary, form 12.

form 19 is valuable. If desired, it can be reduced to the monthly figures only, taken from form 7. In that case, it is not easily susceptible of proof.

Form 20—Distribution of Food Costs

This sheet gives the final distribution of food costs based on forms 4, 18, and 19. From form 4 is learned the number of persons whose board is chargeable to the various patient groups; from form 19 is learned the number of employees whose board is chargeable to the various groups of employees for various departments; and from form 18 is learned the cost of food for each type of dietary. The amounts for each board account are shown here, and totals of various ultimate groups, such as ward patients, private-room patients, administrative officers, and general employees, etc., are shown. Finally, the percentage for each account is shown. This is interesting, because in a comparison of two institutions it is necessary to know whether service forms a larger part of the element of cost in one than in the other; obviously an institution having three employees for every guest or inmate will show a cost very different from that of an institution having one employee for every three guests or inmates. It is important, moreover, for it furnishes the basis for the distribution of the cost of preparing food—and in the long run the cost of preparation is found to follow approximately the cost of raw material. Indeed, the final distribution of all costs connected with food is made on this percentage.

FORM 20 Month of *January, 1912*

DISTRIBUTION OF FOOD COSTS

Service	Number of Days (Form 4)	Daily Rate (F'm18)	Account Symbol	Amount	Account Total	Per Cent
Ward Patients						
House diet	2,680[2]	.37	RBW	991.84		
Fever diet	261[2]	.18	RBW	47.10	1,038.94	.488
Private Room Patients						
Special diet	606	.45	RBP	272.70		
House diet	94	.37	RBP	34.78		
Fever diet	45	.18	RBP	8.10	315.58	.148
	3,687[1]					
	(Form 19)					
Administrative Officers	120	.45	ASb	54.00		
Employees	75	.37	ASb	27.75	81.75	.039
Telephone Employees	30	.37	ATb		11.10	.005
Professional Service, A	152	.45	PSbw		68.40	.032
B	171[2]	.37	PSbp		63.52	.03
B	743[2]	.37	PSbz	275.16		
A	43	.45	PSbz	19.35	294.51	.138
Emergency Ward						
etc.						
etc.						
Department Service						
Training school	20	.45	DTb		9.00	.004
Steward's	89[2]	.30	DSb		26.90	.013
Kitchen	309	.30	DKb		92.70	.044
Household	152[1]	.30	DHb		45.70	.021
Laundry	155[2]	.30	DLb		46.70	.022
Boiler room	110[1]	.30	HSb		33.10	.016
etc.						
etc.						
	2,172[1]					
	5,859[2]				2,127.90*	1.000

* The slight discrepancy between this figure and that of form 18 is due to the neglect of small fractions in both cases. Final adjustments will take up this difference.

Form 21—Engineer's Daily Time Card

Form 21 is necessary only when some of the employees, such as those in the boiler-room, are doing various kinds of work chargeable to various departments. If this form is printed on coördinate paper, so that very small spaces are

FORM 21 Day *January 10, 1912*

ENGINEER'S DAILY TIME CARD

	Boiler	Care of Grounds	Care of Vegetable Garden	Housework and House Supplies	Care of Patients	Electric Lights	Food Storeroom	Medical Storeroom	Repairs of Buildings	Repairs of Tools and Machinery	Repairs of Plumbing	New House Construction
Account	HSs	HL	DSmvf	DHs	PSo	HE	DSs	PMs	HMB	HMQ	HMP	B
7.00												
15												
30												
45												
8.00												
15												
30												
45												
etc.												
etc.												
etc.												
etc.												
1.00												
1.15												
1.30												
1.45												
2.00												
2.15												
etc.												
etc.												
	4	*1*		*1*	⅜		¾	*1*	*1*			

shown, it is likely to be much more serviceable than on ordinary paper. Down the left of the pages are shown the various hours of the day, at fifteen-minute intervals. The employee indicates by pencil marks the hours at which he begins or quits any particular type of work—at least each type of work chargeable to any account differing from the account for the work preceding or following. The columns of this form indicate the commoner types of work likely to be performed by such an employee. They also give the symbols—for convenience of notation. By a comparison of time shown here with actual time of employment, one can learn of any uncharged time and distribute it proportionately among the accounts concerned. At the foot of the form is given the total number of hours in the day chargeable to the various accounts named at the head of the form. If the employee is fully occupied, of course, a line should begin in some column directly opposite the end of a line in some other column.

Form 22—Engineer's Monthly Summary

This gives in summary for the month the number of hours' work done by the employees whose time is kept on form 21. The extensions show the total chargeable to each account. If the employee is boarded on the premises, it is obvious that his board should be distributed among these accounts on the basis of the number of hours of employment for each. For this purpose a column is provided for the percentage of time (or direct wages) assignable to each department. If the employee does not live on the premises, this column is not needed.

FORM 22

Engineer's Monthly Summary

Work	Account Symbol	1	2	3	Etc., Etc.	Total for Month	Hour Rate	Amount	Per Cent* of Total
Care of patients	PSo	2	1			35	.20	7.00	.11⅔
Care of medical and surgical supplies	PMs	½				18		3.60	.06
Care of food supplies	DSs					etc.		etc.	etc.
Care of vegetable garden	DSmvf								
Care of house and house supplies	DHs	1	2						
Repairs of electric lighting	HE								
Repairs of buildings	HMB								
Care of grounds	HL	3	3						
Repairs of machinery and tools	HMQ	½	1						
Care of boiler	HSs	3	3						
Repairs of plumbing and steam-fitting	HMP								
Additions to electric lighting, plumbing and steam-fitting	B								
Total hours		10	10					60.00	100

* This column is not necessary if the engineer does not live on the premises.

Form 23—Space-Cost Basis

This form furnishes the basis for the distribution of space costs—that is, the cost of light, heat, cleaning, insurance on buildings, taxes on buildings and land, etc. It usually may be made up from the architect's plans, but an exact calculation of space is seldom necessary. In the illustration given, rough rectangular dimensions were taken, and then allowances were made (as shown by the column with the heading "out") for jogs, light wells, etc., cut out from the rectangular space. The figures of net floor space are kept as a means of finding average cleaning costs, etc. The benefit of the basement, halls, stairways, etc., is supposed to be shared proportionately by all departments, and hence is undistributed. Entire neglect of it in the distribution raises each department's proportional share properly. The amounts in the column headed "undistributed" are therefore subtracted from the net floor space, as indicated on the form. When this undistributed amount has been subtracted from the net floor space, the remainder is the figure on which all items of distribution for floor area must be apportioned to the various departments. This figure multiplied by the height gives for each floor the cubic space which is to be used in distribution; and the net cubic space is found by multiplying the net floor space by the height, for statistical uses in determining the average cost per cubic foot for heating, etc. This form, it will be observed, divides the buildings in floors, on the assumption that all rooms on the same floor are chargeable at the same rate for their space cost. Under some conditions this would be varied, for different rooms on the same floor might be chargeable at different rates, and rooms on different floors might be chargeable at the same rate. The aim of this form is to find the bases, whatever they are, for use in form 24. When once calculated, they are permanent.

FORM 23

Space-Cost Basis

Building	Floor	Base Dimensions	Gross Floor Space	Out *	Net Floor Space	Undistributed	† Floor Space to Apportion	Height	Net Cubic Space	Cubic Space to Apportion
Ward	1	$73^2 \times 38^2$ + solarium	3,145		3,145	452	2,693	13.2	41,514	35,548
	2		3,145		3,145	452	2,693	11.5	36,168	30,969
Administrative	1	99x41 + Pav.	4,080		4,080	1,108	2,972	13.2	53,856	39,230
	2		4,080	645	3,435	1,126	2,309	12.7	43,624	29,324
	3		4,080	645	3,435	1,126	2,309	9.7	33,320	22,397
			18,530	1,290	17,240	4,264	12,976		208,482	157,468

* For jogs cut out, light wells, etc.

† The benefit of the basement, the halls, the stairways, the elevator, etc., is supposed to be shared proportionately by all departments, and it is disregarded in distribution. The net space is kept for statistical purposes only.

Form 24—Space Cost Distribution

This form makes the calculation, for each department in the institution, based on the figures shown in form 23. If several rooms form a group serving the same purpose, it is unnecessary to distribute costs to each room. For this reason columns are provided for "separate floor space" and "combined floor space"; by the use of the combined floor space, one distribution serves the total for any group of rooms of which the space cost is chargeable to the same account. The space of a room treated by itself is extended in the same column as the combined space for groups. The floor space is multiplied by the height, as in the preceding form, and the result gives the combined cubic space. These figures compared with the first-found spaces, as shown on form 23, give the percentage of floor space and of cubic space chargeable to each room or group of rooms. The last column gives the symbol of the account to which charges are to be made for these rooming or housing costs. Where a group of rooms is used in common by two or more groups of persons, as here the lavatory, the bath-room, the linen closet, the clothing room, and the solarium, the division of cost may be on the basis of beds. Here, for instance, a person occupying a large and expensive private room is chargeable for no larger share of cost of maintaining the clothing room or solarium than one occupying a bed in the lowest-cost ward. This principle is again illustrated in the case of the dining-room, which is used in common by the employees of the housekeeping department, the kitchen department, and the laundry department. Its cost is consequently divided among those three departments on the basis of the number of persons boarded for each.

Since several accounts have more than one item here, as RHP, RHW, and DKh, a list is made, and filed with this form 24, for the total percentage chargeable to each ac-

FORM 24 SPACE COST DISTRIBUTION

Building	Floor	Room	Dimensions	Separate Floor Space	Combined Floor	Height	Combined Cubic	Share Floor Space	Share Cubic Space	Account Symbol
Ward	1	Lav. and Bath-room	15 x13.8	207						
		Linen closet	5 x13.8	69						
		Clothing	5 x13.8	69						
		Solarium		315	660	13.2	8,712	.0509	.0553	RHP & RHW *
		Diet Kitchen	7.2x13.8		100	13.2	1,320	.0077	.0084	DKh
		Ward Room	36 x38.4		1,381	13.2	18,229	.1064	.1157	RHW
		Private Rooms (4)	13.8x10	138x4 =	552	13.2	7,287	.0425	.0463	RHP
	2	Lav. and Bath-room	15 x13.8	207						
		Linen closet	5 x13.8	69						
		Clothing	5 x13.8	69						
		Solarium		315	660	11.5	7,590	.0509	.0482	RHP & RHW *
		Diet Kitchen	7.2x13.8		100	11.5	1,150	.0077	.0074	DKh
		Ward Room	36 x38.4		1,381	11.5	15,881	.1065	.1009	RHW
		Private Rooms (4)	13.8x10	138x4 =	552	11.5	6,348	.0425	.0403	RHP
Administrative	1	Matron	14 x36		504	13.2	6,653	.0389	.0422	ASr
		Office	14.5x18.6	270						
		Reception Room	14.5x18.6	270	540	13.2	7,128	.0416	.0454	AOh
		Private Room No. 1	14.5x18.6	270						
		Private Room No. 2	14.5x19.9	288						
		Private Room No. 3	14.5x20.0	290	848	13.2	11,193	.0654	.0712	RHP
		Operating Room	60 x18		1,080	13.2	14,256	.0832	.0905	PMh
	2	Nurses' Floor	(Form 23)		2,309	12.7	29,324	.1779	.1862	PSrz
	3	Laundry	13 x38.5		500	9.7	4,850	.0385	.0308	DLh
		Servants' Room No. 1	14.6x15.5		226	9.7	2,192	.0174	.0139	DKr
		Servants' Room No. 2	12.6x15.5		195	9.7	1,892	.0151	.0119	DHr
		Dining Room	14.6x15.5		226	9.7	2,191	.0174	.0139	DHr, DKr, DLr†
		Kitchen	39 x24		936	9.7	9,079	.0721	.0576	DKh
		Cook's Room	14.6x15.5		226	9.7	2,192	.0174	.0139	DKr
					12,976		157,468	1.0000	1.0000	

* The division is on the basis of beds.

† The division is on the basis of the number of persons.

count. When arranged in the order in which accounts are kept in the ledger, this list may be conveniently used for making the entries.

Form 25—Monthly Record of Ice

Very commonly it is unnecessary to provide any special treatment for ice; but if it chances that there is a large consumption of ice in certain wards of a hospital and at the same time in the steward's department, accurate distribution of the cost requires that notes shall be made of these facts. If ice is charged immediately to one account, HO, and is then distributed to the wards for medical purposes,

FORM 25 Month of *January, 1912*

MONTHLY RECORD OF ICE

Medical Purposes	Days							Total
	1	2	3	4	5	6	etc., etc.	
Ward 1	*15*							
2	*20*							
3								
Total	*35*							
Steward's Dept.	*90*							
Household	*25*							
Grand total *	*150*							

Medical and surgical supplies (PMo) lbs. at =
Steward's department (DSo) lbs. at =

* This should agree with the charge to HO. The amount chargeable to the household is not carried below here, for as all ice is charged to HO, credit should be given HO for the amount chargeable to PMo and DSo, and the balance of HO will then be a general house charge.

to the steward's department, to the kitchen department, and to the housekeeping department for ice water, etc., a record should be made of the amount taken by each department each day. This form provides for a monthly distribution of ice costs. Ice not absorbed by medical and food uses should be considered a general house charge, like water, gas, etc.

CHAPTER VII

CLOSING PROCESSES

Charges for Ice

On the information given by the Monthly Report of Ice (form 25), PMo and DSo are to be debited and HO is to be credited. If there is no general consumption of ice, as in drinking fountains for visitors and for employees, HO should have no balance. (See closing entry No. 1, page 187.)

Depreciation Charges

The purpose of depreciation accounts is to prevent unfair distribution of costs between periods—months, or years, or superintendent's régimes. Only when depreciation is considered can comparisons be made either within an institution or between institutions. The basis of the allowance for depreciation should be always the *use* of the property. Supposed market price has nothing to do with the cost of the institution's activities. If, for example, land has risen in value, that increase in value cannot offset depreciation in the value of buildings that must be sooner or later replaced unless the institution is to move or sell part of its land. Even if the land is to be sold, the change in the value of buildings and land should be reported separately; for the depreciation of the buildings has arisen from the exhaustion of capital in conducting the work of the institution, but the change in land value has arisen from causes outside its control. Since, moreover, the new value of the land is not of any *use* to the institution until the land is

sold, the original cost valuation should remain until the sale has been actually made.

If maintenance has presumably kept the value of any equipment intact, as in most institutions it generally can for most departments, no depreciation need be charged in those departments; but unless extensive repairs or betterments are made frequently in buildings, the building account should be steadily written down. The same thing is true of the boiler-room equipment. Care should be taken to see that the book valuation of surgical apparatus, etc., is not continued too high, thus necessitating a heavy charge in the period when replacements become necessary. The cost of all extensive replacements should be spread over as many periods as the life of the apparatus replaced. This does not mean, however, that each particular bit of replacement must be treated by itself, but only that for any department as a whole the sum of repairs and replacements and depreciation should be a practically steady charge month after month and year after year—except so far as an increase or decrease in the activity of the department, and hence the use of property to be maintained, may result in an actual increase or decrease in the cost of maintenance. When, therefore, in any period the expense of repairs and renewals or replacements in any department as a whole is less than a fair average for a long period of years, depreciation, and therefore current expenses, should be charged for the difference; and when new equipment more than restores the equipment of the department, the excess may be charged to the capital account of the department.*

Since in institutions the cost accounting is less for the purpose of guidance in making prices than it is in factories working under fierce competition, elaborate formulæ for apportioning depreciation are not necessary; and even with

* Since most institutions live from hand to mouth, it is not usually feasible to accumulate a fund for replacements.

such a formula, unless one could be sure that it were applied similarly in all institutions, comparison of figures would be misleading. It is wise, therefore, to consider the normal annual depreciation of any equipment to be its cost divided by the estimated number of years of life. If repairs and replacements keep up the estimated future life of the whole equipment of a department at the original figure, no depreciation need be charged; if they do not, the periodic charge to depreciation should be enough to amount, at the time of expected replacement, to the cost of such replacement. If, for example, one-fifth of the equipment is replaced every year in a department having equipment of an average life of five years, maintenance has kept the property intact and no depreciation need be charged.

The following depreciation accounts may need to be debited, and the corresponding capital accounts credited: AOx, ATx, PMx, PDx, PEx, PXx, DMx, DTx, DSx, DKx, DHxd, DHxt, DHxz, DLx, HXB, HXQ. (See closing entry No. 2.)

Temporary Depreciation Accounts

When the expenditures for maintenance are fairly even year by year, but are unevenly divided among the months, and it is desired to get monthly figures, the device of an account called Temporary Depreciation may save a good deal of labor. This should be credited, as a temporary liability, for the depreciation in each department; and then, when purchases make good such depreciation, Temporary Depreciation should be debited. When the accounts are closed at the end of the year, if in any department the property has been allowed to run down during the year as a whole, so that Temporary Depreciation has a credit balance (a liability), this account should be closed into the proper capital account—showing an actual reduction in

property on the balance sheet and on the statement of financial transactions for the year. This Temporary Depreciation can be kept very easily by the use of the subordinate ledger already described—with Temporary Depreciation as a general-ledger account, and the various department temporary depreciation accounts as subordinate-ledger accounts. The natural symbol would be TX, with lower-case-letter additions, to designate subdivisions, corresponding with the capital-letter symbols of equipment accounts—thus TXa, for temporary depreciation of administrative equipment, TXi, for apparatus, etc.

Under such a plan, for regular estimated monthly wear and tear, whether any repairs and replacements have been made or not, the bookkeeper should debit the depreciation account of the department (as PMx) and credit Temporary Depreciation (as TXi). When repairs and replacements are made, on the other hand, he should debit Temporary Depreciation (as TXi) and credit cash. Then when the annual closing is made, Temporary Depreciation (as TXi) will show a debit balance if the expenditures for the year more than offset the estimated depreciation for the year, and such debit balance should be charged to the equipment account (as I), increasing the figure on the balance sheet. If the debits do not equal the credits, the credit balance should be transferred to the equipment account (as I), thus reducing the book asset.

Obviously, on any subdivision in this account, so much of the original debit (made before the closing entries) as does not exceed the credit shows actual maintenance. So much of such debit should then be charged to the maintenance account for the department (as PMa, DHmd, DMm), and should be credited to the depreciation account for the department (as PMx, DHxd, DMx); for to this amount the cost is now known to be for maintenance and

not for depreciation as first recorded. All accounts relating to these matters now stand as they should, thus: capital accounts debited for increases and credited for depreciation; maintenance accounts debited for actual expenditures for repairs and replacements, but not for improvements; depreciation accounts debited for theoretical depreciation but credited for actual maintenance; and temporary depreciation closed without balance. (See page 234.)

In no case should the temporary account go over into a new year.

The only special caution necessary in this method is that the estimate of wear and tear be sane. If too low, the property will be actually depreciated in spite of a valuation continued on the books at the old figure, or will be written up on the books when actually stable or depreciated. If too high, on the other hand, costs will be overstated. The method should be based on adequate experience, or should be checked frequently by careful appraisals of the property.

Interest Charges

Interest should be charged to the various departments for the use of equipment and supplies. The amount of such interest should be credited to the corporation in a special account, ICIH, Corporation Hospital Interest. The rate, however, should preferably approach a pure interest rate, or 3 per cent, for the corporation takes no risk in lending to its own departments—it gets the service. Departments carrying large supplies (the steward's, for example) should be charged interest not only on equipment, but on average supplies carried. The following should be debited: AOi, PMi, PDi, PEi, PXi, DMi, DTi, DSi, DKi, DHid, DHit, DHiz, DLi, HIB, HIQ. (See closing entry No. 3.) The permanent equipment for the Pathological Laboratory and for the Home Nursing Department is likely to be so small

that interest need hardly be separately reported for them: the amount of interest could be included in PMi. Interest on sites and grounds is not taken into consideration; for the cost of land is largely independent of working conditions. If interest on land were included in cost figures, hospitals in the crowded sections of large cities (where they need to do their work) would be at a great disadvantage as compared with hospitals on land that is inexpensive. The aim of our cost accounting is largely to provide a means of judging efficiency; but artificial influences on the price of land actually used for hospital purposes do not at all affect hospital efficiency. Service, not profit, is the aim of hospital management.

Rent Charges

Usually rent paid for the use of land and buildings should be charged directly to the departments using the property benefited—as ambulance department charged for stable or garage rental. This would not affect the distribution of THS or THC, for only so far as these departments use space owned by the hospital should they bear a share of these accounts. The total housing charge to the departments would be the sum of these two items—one a direct rent charge and the other a charge from the distribution of transfer space-cost accounts. So far, on the other hand, as property hired adjoins property owned, mere chance is likely to determine which department is assigned to the rented quarters and which to owned quarters; then the rent may well be charged to a separate account HR, may be transferred thence to THS and THC, and may then be distributed on the usual basis.

Charges for Engineer's Services

From the Engineer's Monthly Summary (form 22) is learned how the engineer's time is divided between different

kinds of work. These various kinds of work are to be charged not only for his wages, but also, if he lives on the premises, for his board, his lodging, etc. It is impossible to get an absolutely accurate figure for each step of the closing process, for to a certain small extent the charges move in a circle—e. g., the board costs depend in part on housing costs (of rooms used for cooking, etc.), and housing costs depend in part on the compensation of the engineer, and a part of his compensation is often board. So we cannot learn exact final board until we have learned the engineer's board, and we cannot learn his board until we learn final board. This difficulty occurs only in starting the process, however, and if we use a fairly reasonable arbitrary figure for a few initial matters of this sort, we shall get a result that errs by only a negligible percentage on a very small item. The error is corrected before final costs are reached, as will be seen later. This is necessary, moreover, only for the first month. After that, the figure of the preceding month would naturally be taken as sufficiently correct, unless a change is known to have occurred.

Let us begin with the attempt to find housing cost. Boiler-room service is one element in it. In trying to get boiler-room cost, therefore, we assume a reasonable arbitrary cost of board, rooms, and laundry for our boiler-room force. The amount for board, rooms, and laundry, plus the wages, gives the total of HS; but this amount should not be entered yet on the books as a debit to HS, for some of the items are not yet accurately known. A part of this total is now debited to the accounts shown on the Engineer's Monthly Summary for their share of his time and in the ratio there shown—but, of course, HS, which represents the cost of engineer's time devoted to the engine, need not be debited now, for it will absorb in the end any undis-

tributed balance. HS will be credited at the time that the other accounts are debited, of course. (See closing entry No. 4.) HS has now a credit balance, but it will be debited later for HSs and for the actual charges to HSb, HSr, and HSl. (See closing entries No. 10, No. 11, No. 12, No. 15). When these debits have been made, later, HS will have a debit balance; and this balance will be the actual cost of power service.

Charges for Power

If electric power is used, it should be separately metered for each department using it. If power is taken from the boiler, the power used for each department should be determined as exactly as possible by competent engineers, and the distribution made accordingly; but since here the cost for each department is a share not merely of the fuel, but of all the costs of the boiler-room, the debit to TP should be not only HF, but also the balance of HS, as already figured—that is, HSs plus estimated HSb plus estimated HSr plus estimated HSl, minus the amount debited to other departments from form 22. If the water consumption is large —e. g., because no condenser is used—HW should be in part charged to TP. (See closing entry No. 5.) Then TP should be credited and the various power-consuming departments should be debited for their consumption. The balance of TP will then usually represent the cost of elevator service and heating. No two institutions may have quite the same conditions with regard to power, but figures for the following accounts must usually be provided for by some process similar to that described above: PMp (for sterilization), DKmf (for steam tables, etc.), DLmf (for laundry steam), HP. (See closing entry No. 6.)

If other departments use directly fuel originally charged to HF, they should be debited (e. g., DKmf and DLmf)

and HF credited, for the weight, at purchase prices, each month.

Charges Based on Floor Space

The following are to be closed periodically into THS, which is to absorb the amount to be distributed later on the basis of floor space occupancy: HW,* HO, HL, HR, HMQ, HXQ, HIQ, HZ. To this account should also be charged the amount of DHs, DHb, DHr, DHl, DHmz, DHiz, DHxz, DHf—and DH should be credited.† (See closing entry No. 7.) Entries will not be made to DHs, DHb, etc., at this time, for some are not yet accurately determined, and these accounts need not be closed into DH until the end. Since three charges named (DHb, DHr, DHl) cannot be exactly determined until after THS itself has been found (for they are all dependent on the distribution of THS), in the first month of the use of this system they must be taken arbitrarily at a fair estimate for this calculation. In subsequent months, the figure of the preceding month had best be taken arbitrarily unless known charges suggest increase or decrease. The amount of error resulting from this estimate is small in any department, and is corrected before final costs are reached. The debits to these accounts (DHb, DHr, DHl), therefore, should not be made until the amounts have been exactly determined; then any balance should be carried to the adjustment accounts, as explained later.

THS is to be distributed on the percentage shown on the Space Cost Distribution sheet (form 24) to the following accounts: ASr, AOh, ATr, ATh, PSrp, PSrw, PSrz, PMr, PMh, PDr, PDh, PEr, PEh, PHr, PHh, PXr, PXh, DMr, DMh, DPr, DPh, DTr, DTh, DSr, DSh, DKr,

* See note on p. 179.

† All these processes are worked out with actual figures in Appendix D, and this particular process is shown on page 223. Both general and subordinate ledger follow—but in skeleton form.

DKh, DHr, DLr, DLh, HSr, RHP, RHW. Few institutions engage in all the activities represented by these accounts, but the books should show them for those which do. (See closing entry No. 8.)

Charges Based on Cubic-Space Occupancy

The following are to be closed periodically into THC, which is to be distributed on the basis of cubic-space occupancy: HT, HE, HG, HP, HMB, HXB, HMP, HN, HIB.* (See closing entry No. 9.)

This distribution is made on the percentages shown on the Space Cost Distribution sheet (form 24), to the same accounts as was THS—unless for some reason a space involved in one space cost is not involved in the other. If any space is only partly lighted and partly heated, it may count for less in the distribution; but the total cubic cost is made up of so many elements that an immunity in one particular is likely to be offset by extra costs in others, and the average is likely to be fair. Straight subdivision by space is recommended for the sake of uniformity; but when buildings of various grades are used by the same institution, such as stables, power plants, etc., either separate schedules should be used for each grade of building or all should be brought to a common unit of cost by multiplying or dividing dimensions. (Since the debit accounts are the same as for THS, entry No. 8, the closing entry is not given. The two entries may well be combined into one.)

* The line drawn between those things to be distributed on floor space and those on cubic space is necessarily more or less arbitrary. To be exact, one might say that part of the water (for bathing and cooking) should be distributed on a per capita basis, part (for scrubbing) on floor space, and part (for heating) on cubic space. Of course this would be an absurd refinement. The method adopted here is to distribute on cubic space only those house charges which are affected directly by the height of rooms, and to distribute all other house charges on floor space. Water consumption known to be chargeable to the laundry, if expensive, should be charged to DLmz before the debit balance of HW is distributed.

Household Charges

The amount of DHmd, DHxd, and DHid should be credited to DH, and the various accounts for rooms (symbol r) should be debited, on the basis of the number of beds. If differences in quality of equipment prevail, allowance should be made. (See closing entry No. 10.) Similarly, the amount of DHmt, DHxt, and DHit should be credited to DH and the various accounts for board (symbol b) should be debited, on the basis of the number of persons boarded. (See closing entry No. 11.) The distribution of these maintenance expenditures should be made to each department even though no expenditure occurs within the month for the rooms used by the particular department; for it is easier to maintain a constant ratio than to vary individual departments month by month, and it produces the same result in the end if the ratio is correct; for any proportion of the total expenditure for all departments, for each month, charged to any department each month, is the same in the end as that proportion of the total monthly expenditures for the same number of months. Whether in any month the dormitory replacements happen to be for any particular department does not matter—if only each department bears its proportion of total dormitory replacements of all the departments for all the months.

Laundry Charges

For DLl and DLb an arbitrary figure should be temporarily assumed (but after the first year the last year's figures should be taken, unless there is reason to assume an increase or a decrease), and then the sum of these items and all the other DL accounts should be distributed as debits to the various accounts representing laundry charges

to the departments.* (No entry should be made to DLl and DLb until the exact amounts have been determined by the appropriate entries.) When these debits are made to departments for laundry work, DL (not DLl and DLb) should be credited. The distribution of debits to the various l accounts (ASl, ATl, PSlp, PSlw, PSlz, PMl, PDl, PEl, PHl, PXl, DMl, DPl, DTl, DSl, DKl, DHl, DLl, HSl, RLP, RLW) will be determined by laundry statistics, showing the amount of work done for the various departments. (See closing entry No. 12.) As was indicated in connection with the other accounts, any reasonable error in the estimate for DLl and DLb will produce little effect on any one department, because it is so widely distributed, and it is corrected before the final cost figures are reached.

Food Charges

To TB should then be debited the total of all costs for the period in the Steward's Department and in the

* No very satisfactory method of distributing laundry costs has been found. It is always possible to find the cost per hundred pieces, and distribute on that basis; but that burdens some departments unduly and leads to unfair comparisons between institutions that change linen in different proportions from others. An institution changing tablecloths frequently, but napkins infrequently, will show a higher laundry cost per hundred than one reversing this practice, even though the actual laundry cost is the same. The most satisfactory method is to make a time study of laundry operations (under the actual conditions prevailing in the institution) and learn how many articles of each sort are equivalent to one of a standard or unit sort. In one laundry studied by the writer and Mr. John E. Hyde, an advanced student in business administration, hand towels were taken as the unit and other articles were rated as equal in cost to a certain number of units. The table follows:

Hand towels	1	Pillow slips	1¾
Napkins	1¼	Sheets	6
Towels (av. length)	1⅓	Table cloths	12

These figures, it will be noticed, are independent of absolute cost. Whether any or all of these things cost more or less than they should is another question. These figures make it possible to know what proportion of laundry cost should be borne by each department, for when all laundry work sent by departments is converted into units, the proportion to be borne by each is obvious.

The figures above should not be taken offhand as applicable to other institutions, for they were derived from a somewhat inadequate number of time-studies in a laundry that gives special attention to careful folding (square corners, even folds, etc.) of table linen. Each laundry should be the scene of study for its own conditions. Washing, extracting, tumbling, sorting, ironing, folding—all should be observed.

Kitchen Department. The amount properly belonging to any month may be more or less than the amount already entered on the books at this stage, however. More food may have been purchased, for instance, than has been consumed. If, then, the inventory of food is larger in any month than in the preceding month, the debit to TB for food supplies should be less than the total of all DSm accounts by the amount of such increase of inventory; and if the inventory is less, the amount chargeable to TB on account of food supplies should be greater than DSm by that shrinkage. Assumed charges for DSb and DKb (by the methods and for the reasons previously explained in other connections) should be added to these costs for DK accounts and DS accounts, and then the total for DS and for DK should be charged to TB; and DS and DK should be credited for the amounts found for each; but DSb and DKb will not be debited until the exact amount is determined by the distribution. (See closing entry No. 13.)

It will be noted that at the end of the first month the food accounts will have been debited for the stores purchased (in DSm accounts), and will have been credited (in DS) for the food consumed, as just indicated. Then DS will have a debit balance at the end of the month equivalent to the inventory of supplies on hand. (Any excess debit balance, above this inventory, or deficient debit balance, below it, arises from a distribution of costs before actual costs have been determined, and will be disposed of as indicated later.) This inventory figure may well be carried to an inventory account (appearing in the balance sheet as materials on hand), thus closing DS by an entry debiting Inventories of Material (U), and crediting DS. Each month Inventories of Material should be debited for additions and credited for shrinkages, and DS should be correspondingly credited or debited. Since DS is a pure

expense account, it should show the cost of what is consumed. It is unnecessary to allow for exact record of inventory, on the ledger, for each class of food supply. Since the group account, DS, allows for the total, the expense ledger may omit detailed inventories. It is well, however, to provide in the expense ledger a column for changes in the inventory, for then the balance of the expense ledger will agree with the balance of the general-ledger account for the department—which will be a true controlling account. This expense-ledger account, which we may call "inventory changes" (DSv), will then be a true nominal account. It will be debited for any shrinkages in supplies on hand, and will be credited for any increases; and a shrinkage means a consumption of more than was debited through purchases, and an increase means a consumption of less. The entry to DS in the general ledger is made through the special inventory-changes account in the expense ledger—from which ledger, of course, all other entries reach the general-ledger accounts. The actual amount of inventory will be kept in Inventories of Materials—a general-ledger account representing property—and this will be debited (as the departmental inventory-changes account is credited) for any increases in inventory, and will be credited for any decreases (as the departmental inventory-changes account is debited). (See closing entry No. 14.) If at any time it is desired to show on the books the exact consumption (and not merely the purchases) of each kind of food represented by an account, this can be done by closing the inventory-changes account into the accounts for the various foods. This will not affect the general-ledger account, for it will merely shift balances among subdivisional accounts.

This same device may be used for other departments purchasing supplies in advance of requirements (like DKmf,

PSm, DHmd, DHmt, DHmz). The account for inventories of material may be kept with little labor if the form recommended for the expense ledger is used for the various details (total for each department), and in the general ledger is the controlling account, Inventories of Materials (U). It should be remembered, however, that the debit balances of this account at any time represent property, but the debit balances of the inventory-changes accounts, showing shrinkages, represent expense.

TB should next be credited for its total, and the corresponding debits should be distributed to the various board accounts in the ratios (percentages) shown on the Distribution of Food Costs (form 20), as follows: ASb, ATb, PSbp, PSbw, PSbz, PMb, PDb, PEb, PHb, PXb, DMb, DPb, DTb, DSb, DKb, DHb, DLb, HSb, RBP, RBW. (See closing entry No. 15.)

Charges for Professional Services

The cost of services of persons engaged exclusively in the professional care of patients in private rooms and of patients in wards should now be transferred to RSP and RSW; for example, if patients in private rooms engage their own physicians, PSd should be charged to RSW, by a credit to PS for the total of the account and a debit to the RSW. Similarly, if the special nurses and special orderlies are engaged exclusively in private-room service, PS should be credited for the total of PSnp and PSop, and RSP should be debited. So also the amount of PSbp, PSrp, and PSlp should be debited to RSP, and PS should be credited; and PSbw, PSrw, PSlw should be debited to RSW, and PS should be credited. Then the time of each class of persons engaged in serving both private rooms and wards should be divided as accurately as possible between the two classes of service, and on the basis of that division the re-

maining charges for professional salaries should be divided; and RSP and RSW should be debited, and, of course, PS should be credited. Finally, on the same basis of division (say 30 per cent for RSP and 70 per cent for RSW), the totals of PSbz, PSrz and PSlz should be debited to RSP and RSW, and PS should be credited. Next PQ and PM should be closed into RSP and RSW in the proportion of the number of patient-days of each class of service. Of course these entries will be combined into one. (See closing entry No. 16.)

Closing Subsidiary Expense Accounts

The next step is to close certain detailed expense accounts of the subordinate ledger into the general ledger. For example, PS has been credited for the amount transferred to RSP and RSW, but it has been debited nothing; and the various subordinate accounts under PS have been debited for salaries, wages, board, etc., but have been credited for nothing. The subordinate accounts for PS in the expense ledger should now be posted, or transferred, to the general-ledger account PS. This process should be applied to all subordinate expense accounts—and their corresponding group accounts in the general ledger—except those for the ultimate groups of cost, which are to absorb a part of the administrative expense. The accounts to be closed at this point are the following: PS, PQ, PM, DS, DK, DH, DL, HS, HZ. Certain general-ledger accounts —PS for instance—will be closed by this process. The record of the amount of PS is already transferred to RSP and RSW, and therefore is not lost. The only complication will occur in a few accounts from which transfers were made before the exact cost was known, as with HS. There slight discrepancies will appear, for these accounts will have small balances to be adjusted. These balances should be

closed out into the appropriate resident accounts, for, as the institution is conducted primarily for residents, the balances are chargeable or creditable to the ultimate resident accounts. The following accounts, for example, may have small balances: DS, DK, DH, DL, HS. Obvious entries will close them. (See closing entries Nos. 17, 18, 19.)

The expense-ledger items for AS, AO, AT, should now be closed into their group accounts in the general ledger.

Administrative Charges

All departmental costs have now been closed to the various departments, and various department accounts have been closed into ultimate accounts, and only administrative costs remain undistributed. These may now be distributed as a percentage on the costs previously found.* If total departmental costs, exclusive of administration, are $33,000, and the administrative cost is $3,300, obviously 10 per cent should be added to the cost for each ultimate account. A trial balance taken at this stage would show for expense accounts only the following with any balances: AS, AO, AT, AL, AZ, PD, PE, PH, PX, DM, DP, DT, RHW, RHP, RBW, RBP, RLW, RLP, RSW, RSP. If the sum of the first five is divided by the sum of all the others, the quotient will give a percentage of administration cost. This percentage applied to the amount for each resident account or department account will give the proper charge for administration to that division. Since, however, it is absurd to figure administration separately as an element of cost for patients' service, patients' food, patients' laundry, etc., this percentage can well be applied at once to the sum of RHW, RBW, RLW, RSW for ward patients, and to the sum of RHP, RBP, RLP, RSP for private-room patients. The

* Sometimes other bases should be used, for certain departments may require special attention, or their work may involve special bookkeeping costs, etc.

amount should be debited to RAW and RAP respectively. The debits to the other activities designated above (PD, PE, PH, PX, DM, DP, DT) should be made through their subordinate-ledger accounts (symbol z—miscellaneous) in each case. Of course the entries debiting these various accounts will credit the administrative accounts named above. This will close out the administrative accounts. (See closing entry No. 20.)

Final Expense-Ledger Closing

The expense-ledger accounts for the remaining groups should now be closed into the general-ledger accounts for the corresponding groups.

Closing Entries

No. 1

PMo
DSo
To HO

No. 2

AOx
ATx
PMx
PDx
PEx
PXx
DMx
DTx
DSx
DKx
DHxd
DHxt
DHxz
DLx
HXB
HXQ
To A
I
D [*continued*]
E [*continued*]
X
M
T
S
K
R
F
H
L
B
Q

No. 3

AOi
PMi
PDi
PEi
PXi
DMi
DTi
DSi
DKi
DHid
DHit [*continued*]
DHiz [*continued*]
DLi
HIB
HIQ
To ICIH

No. 4

PSo
PMs
DSs
DSmvf
DHs
HE
HMB
HL
HMQ
HMP
B
To HS

No. 5

TP
To HF
HS
HW

No. 6

PMp
DKmf
DLmf
HP
To TP

No. 7

THS
To DH
HW
HO
HL
HR (?)
HMQ
HXQ
HIQ
HZ

No. 8

ASr
AOh
ATr
ATh
PSrp
PSrw
PSrz
PMr
PMh
PDr
PDh
PEr
PEh
PHr
PHh
PXr
PXh
DMr
DMh
DPr
DPh
DTr
DTh
DSr [*continued*]

DSh [*continued*]
DKr
DKh
DHr
DLr
DLh
HSr
RHP
RHW
To THS

No. 9

THC
To HT
HE
HG
HP
HMB
HXB
HMP
HN
HIB

No. 10

ASr
ATr
PSrp
PSrw
PSrz
PMr
PDr
PEr
PHr
PXr
DMr
DPr
DTr
DSr
DKr
DHr
DLr
HSr
RHP
RHW
To DH

No. 11

ASb
ATb
PSbp
PSbw
PSbz
PMb
PDb
PEb
PHb
PXb
DMb
DPb
DTb
DSb
DKb
DHb
DLb
HSb
RBP
RBW
To DH

No. 12

ASl
ATl
PSlp
PSlw
PSlz
PMl
PDl
PEl
PHl
PXl
DMl
DPl
DTl
DSl
DKl
DHl
DLl
HSl
RLP
RLW
To DL

No. 13
TB
To DK
DS

No. 14
U
To DSv
(or reversed)

No. 15
ASb
ATb
PSbp
PSbw
PSbz
PMb
PDb
PEb
PHb
PXb
DMb
DPb
DTb
DSb
DKb [*continued*]

DHb [*continued*]
DLb
HSb
RBP
RBW
To TB

No. 16
RSP
RSW
To PS
PQ
PM

No. 17
RHP
RHW
To DH
HS
(or reversed for either DH or HS)

No. 18
RBP
RBW [*continued*]

To DS [*continued*]
DK
(or reversed for either DS or DK)

No. 19
RLP
RLW
To DL
(or reversed)

No. 20
RAP
RAW
PDz
PEz
PHz
PXz
DMz
DPz
DTz
To AS
AO
AT
AL
AZ

The actual working out of these entries, with figures, is given in Appendix D. The general ledger and the subordinate ledger are both shown there in skeleton form.

Schedule 4—Final Summary of Institution Expenses

The balances of expense now remaining on the ledger are for ultimate accounts only, ready for use in the summary schedule of expenses, as follows:

Dispensary
Emergency Ward
Home Nursing
X-Ray Service

Ambulance Service
Pathological Laboratory
Training School
Private-Room Patient Housing
Ward Patient Housing
Private-Room Patient Board
Ward Patient Board
Private-Room Patient Laundry
Ward Patient Laundry
Private-Room Patient Professional Service
Ward Patient Professional Service
Private-Room Patient Administrative Cost
Ward Patient Administrative Cost

These are grouped for reporting purposes—for general comparison with other institutions—as shown on pages 192-193. For some of the details shown on this schedule reference must be made to calculations off the books, as on form 18; other details are in the subordinate ledger; and others are in the general ledger. Of course uniformity could be produced by getting all desired figures into the general ledger; but this would unduly complicate the bookkeeping. The complete schedule of expenses, showing all principal and subordinate accounts, should be published in full if comparative study is to be worth much; this schedule IV is meant for summary use only.

Purpose of Summary Schedule of Expenses

For many purposes this schedule is the most important of all. It attempts to give the final figures for enabling us to make a comparison between the institution for which the figures are shown and any other institution with which a comparison is desirable. As will be seen from the form itself, three main types or groups of expenses are shown. These are administrative expenses, the cost of professional

care of patients, and the living expenses. These groups are shown because they represent the ultimate purpose of all expenses within such an institution as a hospital. The prime function is, of course, to provide professional care of patients, and this group therefore is the all-important group; but since professional care cannot be rendered without providing housing and board for patients, the living expenses form the next most important cost; and since neither of these things can be provided except through an administrative force, the cost of administration forms a separate group. The total for each of these groups is taken from general-ledger accounts, but each is subdivided into its main elements, so that comparison may be made between institutions for those subdivisions as well as for the group cost in total. The figures for the subdivisions are taken from the subordinate ledger or from cost forms.

Certain special items relating to professional care of patients vary not so much with the number or kind of patients as with other circumstances. These are shown on a separate statement indicating the cost per unit of service.

Arrangement of Summary Schedule of Expenses

The first column shows the type of expense or service; the second shows the symbols of the accounts from which the information is obtained; the third shows the amount of debit to those accounts; the fourth shows the total of the group or the subdivision of a group. The living expenses are divided into two groups, so as to show separately the board cost and the other costs. For the upper half of the schedule columns are provided for ward patients and for private-room patients separately. These give the cost per patient-day, not only for principal details, but for the group total. The line at the foot of this part of the statement gives the total for each column; and hence the pairs of col-

Year 1912

SCHEDULE IV

Final Summary of Institution Expenses

(Conversion of all expenses into cost per unit)

Service	Source of Information	Amount	Group Total	Ward Patients		Private-Room Patients	
				Per Patient-Day	Group Total	Per Patient-Day	Group Total
Administrative	RAP, RAW	3,219.00	3,219.00	.286	.286	.357	.357
Professional Care	RSW, RSP		14,920.00		1.31		1.82
Physicians	PSd	3,800.00		.38			
Nurses	all PSn	2,250.00		.15		.75	
Orderlies, etc.	all PSo, PSw	700.00		.05		.20	
Board of nurses, etc.	all PSb, PSr, PSl	4,430.00		.39		.53	
Equipment	PQ	440.00		.04		.04	
Supplies	PM	3,300.00		.30		.30	
Living Expenses							
Board	RBW, RBP		5,771.00		.507		.699
Food Supplies *	Form 18 ††	3,994.00		.357		.424	
Cooking, etc.†	Bal.ofRBW,RBP	1,777.00		.15		.275	
Other			7,880.00		.70		.88
Laundry	RLW, RLP	1,170.00		.10		.17	
House	RHW, RHP	6,710.00		.60		.71	
Total general		31,790.00	31,790.00	2.803	2.803	3.756	3.756

[*Continued on page 193.*]

SCHEDULE IV [*Continued*]

				Units of Service	Number During Period	Cost per Unit
Total general, brought down		*31,790.00*	*31,790.00*			
Special items ‡			*3,620.00*			
Ambulance	DM	*1,500.00*		trips	*1,000*	*1.50*
Pathol. Lab.	DP	*250.00*				
Training School	DT	*500.00*		student-months	*250*	*2.00*
Dispensary	PD	*480.00*		treatments	*800*	*.60*
Emergency Ward	PE	*300.00*				
Home Nursing	PH	*450.00*		visits	*1,500*	*.30*
X-Ray Service	PX	*140.00*				
Grand total		*35,410.00*§	*35,410.00*§			

* Consumed by patients only. † Proportion devoted to cooking patients' food. Except for minor adjustments, this should equal the application of the ratio shown on form 20 for Ward Patients and Private-Room Patients to the balance of TB after deducting the total or net (allowing for inventories) of all DSm items. ‡ The charge for administrative expenses and living expenses connected with each of these activities is included in the figures given. § This includes depreciation, as shown by the various depreciation accounts, to the amount of $1000. †† The figures given here are not for the same hospital as was form 18 given above.

umns, since in each pair one shows details and the other shows totals, should agree. The lower half of the form, showing items for which the patient-day is not a significant unit, names the unit of service for each special type of cost, gives the number of services performed during the period, and finally the cost per unit.

From the figures on this form, therefore, comparisons may be made between institutions in their details, in their group totals, and in their final totals. It is obvious, also, that, if it is desired to compare figures for groups unlike those shown here, a different combination of details from this schedule into such required groups is likely to serve the purpose. If, on the other hand, details here are not detailed enough, recourse may be had to the detailed costs as reported in full on the schedule recommended in Chapter IV. If, for instance, the cost raw of all food consumed (patient or other) were desired for comparison between two institutions, the debit to general-ledger account DS would be taken; but if the cost of food cooked were desired, the total of DS and DK should be taken; but if the total cost of food served to patients were desired, the figure would be as shown in this schedule IV, designated "food supplies." The cost for each patient or employee per capita day may be readily obtained, of course, for any group or subdivision.

The schedule is on pages 192-193.

Closing Entries for General Ledger Accounts

The balances of the expense accounts remaining (ten resident accounts and seven departmental or professional accounts) will now be closed into the final Earnings Account—of which the purpose is indicated on the Statement of Financial Transactions for the Year (pages 43, 46, and 52). The various accounts for income from hospital sources will also be closed into this account.

To the Endowment Income Account, in turn, should be credited income from investments and from interest charged the hospital; and into this account should be closed the balance of the Earnings Account, found as indicated above.

To the Normal Current Income Account should be closed the balance of the Endowment Income Account, and to it should be credited any contributions received from outside sources and any legacies assigned to current use. Corporation expenses should be debited to this account. The balance of this account will be transferred to Surplus and Deficit Account.

The accounts for other kinds of income and expenditure, as suggested by schedule D of the Statement of Financial Transactions (pages 52-53), will be closed, as circumstances may warrant, into Special Funds, Capital Account, Surplus, etc.; but every item to appear on either the Balance Sheet or the Statement of Financial Transactions should be carried to an account such that the item may be identified and reported when occasion arises. Usually a separate ledger account should be maintained for each group of items shown on any of the schedules here indicated—as the four groups of subscriptions shown on schedule VII (page 60), and the three groups of legacies shown on schedule VIII (page 61).

Closing Entries for Institutions Other Than Hospitals

The closing entries for institutions other than hospitals are not usually different in nature or in treatment, for they require the same method of distributing expense burden, administrative costs, and the like, and their transactions should be publicly reported in the same sort of way. A final summary of expenses for an educational institution, for example, could be provided in a form similar to that of sched-

ule IV (page 192), substituting salaries and other compensation of various classes of instructors for compensation of physicians and nurses, adding costs for libraries, museums, etc., and appending laboratory expenses, etc., in place of the cost of special hospital activities. Such a statement might well be combined with schedule VI (illustrated on page 57), so as to show ultimate costs in direct relation with earned receipts.

APPENDIX A

I. Alphabetical Index of Symbols of Hospital Accounts

This index is intended quite as much as a guide to the accounts (a summary view) as to the symbols.

A		Administrative Equipment
AC		General Carting (see page 71)
AL		Administrative Legal
AO		Administrative Office
	f	freight
	h	housing
	i	interest
	m	supplies
	p	postage
	x	depreciation
	z	miscellaneous
AS		Administrative Service
	b	board
	l	laundry
	r	rooms
	s	salaries
AT		Telephone
	b	board
	h	housing
	l	laundry
	r	rooms
	s	salaries
	x	depreciation
	z	miscellaneous

AZ		Administrative Miscellaneous
B		Buildings and Improvements
CA		Corporation Annual Report
CH		Corporation Housing
CI		Corporation Interest
CL		Corporation Legal Expenses
CM		Corporation Supplies
CP		Corporation Postage
CS		Corporation Salaries
CZ		Corporation Miscellaneous
D		Dispensary Equipment
DD		Serving Department (see page 89)
	b	board
	f	freight
	h	housing
	i	interest
	l	laundry
	m	supplies
	r	rooms
	s	salaries
	x	depreciation
DH		Household Department
	b	board (when not subdivided)
	bd	board of chambermaids
	bt	board of waitresses
	bz	board of other household employees
	f	freight
	id	interest on dormitory equipment
	it	interest on table equipment
	iz	interest on miscellaneous housekeeping equipment
	l	laundry (when not subdivided)
	ld	laundry for chambermaids
	lt	laundry for waitresses
	lz	laundry for other household employees
	md	dormitory supplies
	mt	table supplies
	mz	general supplies

r	rooms (when not subdivided)
rd	rooms for chambermaids
rt	rooms for waitresses
rz	rooms for other household employees
s	salaries (when not subdivided)
sd	salaries of chambermaids
st	salaries of waitresses
sz	salaries of other household employees
xd	depreciation on dormitory equipment
xt	depreciation on table equipment
xz	depreciation on miscellaneous housekeeping equipment

DK Kitchen Department

b	board
f	freight
h	housing
i	interest
l	laundry
mf	fuel
mz	supplies
r	rooms
sb	salaries of bakers
sz	salaries of other employees
x	depreciation

DL Laundry Department

b	board
f	freight
h	housing
i	interest
l	laundry
mf	fuel
mz	supplies
o	outside work
r	rooms
s	salaries
x	depreciation

DM		Department of Ambulance
	b	board
	f	freight
	h	housing
	i	interest
	l	laundry
	m	supplies
	r	rooms
	s	salaries
	x	depreciation
	z	miscellaneous
DP		Department of Pathological Laboratory
	b	board
	f	freight
	h	housing
	l	laundry
	m	supplies
	r	rooms
	s	salaries
	z	miscellaneous
DS		Steward's Department
	b	board
	f	freight
	h	housing
	i	interest
	l	laundry
	mb	bread and pastry
	mcb	breakfast cereals
	mcf	flour
	mdc	cream
	mdf	butter and other fats
	mdm	milk
	mdp	condensed milk
	mds	cheese
	mef	eggs, fresh
	mep	egg preparations
	mes	eggs, storage

	mfc	fruits, canned
	mfd	fruits, dried
	mff	fruits, fresh
	mfj	fruit juices
	mfp	fruits, preserved
	mg	groceries and canned goods not elsewhere specified
	mh	sugars, etc.
	mi	ice cream purchased outside
	mmc	meats, canned
	mmd	meats, dried, smoked, cured
	mmf	meats, fresh
	mn	nuts
	mpc	poultry, canned
	mpf	poultry, fresh
	msc	fish, canned
	msd	fish, dried, smoked, pickled
	msf	fish, fresh
	mt	tea and coffee
	mvc	vegetables, canned
	mvf	vegetables, fresh
	o	ice
	r	rooms
	s	salaries
	v	inventory changes
	x	depreciation
	z	supplies not food
DT		Department of Training School
	b	board
	f	freight
	h	housing
	i	interest
	l	laundry
	m	supplies
	r	rooms
	s	salaries
	x	depreciation
	z	miscellaneous

E — All symbols beginning with E indicate capital accounts for the departments having as their general symbols the letters following the E. The departments will be found under the corresponding symbols; but lone E, as well as EPE, may stand for Emergency Ward Equipment; for under one method shown here all capital accounts are represented by single-letter symbols. (See also page 35.)

F	Dining Equipment
H	Household Equipment, General
HE	Electric Lighting
HF	Fuel, Oil, Waste
HG	Gas
HIB	Interest on Buildings and Improvements (including plumbing and steam-fitting)
HIQ	Interest on Machinery and Tools
HL	Care of Grounds
HMB	Maintenance of Buildings
HMP	Maintenance of Steam-Fitting and Plumbing
HMQ	Maintenance of Machinery and Tools
HN	Insurance
HO	Ice
HP	Power
HR	Rent
HS	Services of Engineer and Firemen
b	board
l	laundry
r	rooms
s	salaries
HT	Taxes
HW	Water
HXB	Depreciation of Buildings, etc.
HXQ	Depreciation of Machinery and Tools
HZ	Miscellaneous
f	freight
z	other

I		All symbols beginning with I indicate income accounts, usually for departments having as their general symbols the letters following the I. The departments will be found under the corresponding symbols. But lone I may stand for the capital account for Apparatus and Instruments. (See also below.)
ICD		Income from Stocks
ICGC		Income from Churches
ICGG		Income from Subscriptions, Governmental
ICGO		Income from Subscriptions, Charitable Organizations
ICGP		Income from Subscriptions, Private
ICIH		Income from Interest Charged the Hospital
ICIO		Income from Outside Interest
ICR		Income from Real Estate
K		Kitchen Equipment
L		Laundry Equipment
M		Ambulance Equipment
N		Home Nursing Equipment
O		Sites and Grounds
P		Pathological Laboratory Equipment
PD		Professional Care of Patients, Dispensary
	b	board
	f	freight
	h	housing
	i	interest
	l	laundry
	m	supplies
	r	rooms
	s	salaries
	x	depreciation
	z	miscellaneous
PE		Professional Care of Patients, Emergency Ward
	b	board
	f	freight
	h	housing
	i	interest
	l	laundry

	m	supplies
	r	rooms
	s	salaries
	x	depreciation
	z	miscellaneous
PH		Professional Care of Patients, Home Nursing
	b	board
	f	freight
	h	housing
	l	laundry
	m	supplies
	r	rooms
	s	salaries
	z	miscellaneous
PM		Professional Care of Patients, Medical and Surgical Facilities
	a	apparatus and instruments, repairs and renewals.
	b	board of pharmacists
	f	freight
	h	housing
	i	interest
	l	laundry of pharmacy and pharmacist and operating rooms
	m	medicines, bandages, and other supplies
	o	ice
	p	sterilization
	r	rooms of pharmacists
	s	salaries of pharmacists
	w	stimulants
	x	depreciation
PQ		Professional Care of Patients, Equipment of Nurses
	a	apparatus and instruments
	b	books
	u	uniforms
PS		Professional Care of Patients, Service
	bp	board of those serving patients in private rooms
	bw	board of those serving ward patients

	bz	board of those serving both classes of patients
	d	salaries of physicians
	lp	laundry of those serving patients in private rooms
	lw	laundry of those serving ward patients
	lz	laundry of those serving both classes of patients
	ng	salaries of graduate nurses
	np	salaries of special nurses
	ns	salaries of superintending nurses
	nt	salaries of nurses in training
	o	salaries of orderlies
	op	salaries of special orderlies
	rp	rooms of those serving patients in private rooms
	rw	rooms of those serving ward patients
	rz	rooms of those serving both classes of patients
	w	salaries of ward employees
PX		Professional Care of Patients, X-Ray Service
	b	board
	f	freight
	h	housing
	i	interest
	l	laundry
	m	supplies
	r	rooms
	s	salaries
	x	depreciation
	z	miscellaneous
Q		Machinery and Tools
R		Dormitory Equipment
RAP		Residents, Administration for, in Private Rooms (Patients only)
RAW		Residents, Administration for, in Wards (Patients only)
RBP		Residents, Board of, in Private Rooms (Patients only)
RBW		Residents, Board of, in Wards (Patients only)
RHP		Residents, Housing of, in Private Rooms (Patients only)
RHW		Residents, Housing of, in Wards (Patients only)

RLP	Residents, Laundry of, in Private Rooms (Patients only)
RLW	Residents, Laundry of, in Wards (Patients only)
RSP	Residents, Professional Service of, in Private Rooms
RSW	Residents, Professional Service of, in Wards
S	Steward's Equipment
T	Training School Equipment
TB	Transfer Board Account
THC	Transfer House Cubic-Space Account
THS	Transfer House Floor-Space Account
TP	Transfer Power
TX	Temporary Depreciation (Lower-case additions indicate the particular property depreciated. See page 172.)
U	Material and Stores Inventory
X	X-Ray Equipment

II. Alphabetical Index of Additional Symbols for Institutions Other Than Hospitals

This index does not repeat the symbols given for hospitals, in the preceding list, and common to institutions other than hospitals. It is intended quite as much as a guide to the classification of accounts (a summary view) as to symbols.

No attempt is made in this list to include all symbols likely to occur as mere subdivisions of general accounts when such subdivision is obvious or has been already sufficiently indicated by the preceding list or in the text. Symbols for detailed subdivisions similar in every respect to those already discussed (for example, b for board, r for rooms, h for housing, i for interest, x for depreciation, etc.) apply to subdivisions for most of the group accounts here indicated and therefore do not need repetition. The only symbols for detailed accounts here indicated are those

for accounts more or less peculiar to the departments, or phases of activity, found in certain institutions and not already sufficiently indicated by somewhat parallel cases in other types of institutions.

DA Boats
- DAsi salaries of instructors in rowing and paddling
- DAsz salaries of other employees

DB Library
- DBg binding and rebinding costs
- DBmb bindery supplies
- DBmz general supplies
- DBsa salaries of administrative officers
- DBsb salaries of bindery employees
- DBsc salaries of cataloguers and classifiers
- DBse salaries of runners and errand boys
- DBsl salaries of loan clerks
- DBso salaries of accession-department clerks
- DBsp salaries of shelf-department clerks
- DBsr salaries of reference clerks
- DBss salaries of secretarial assistants
- DBsz salaries of miscellaneous employees

DC Cigar Stand

DD Dining-Room Service

This assumes a separate department independent of the housekeeping department. On page 89 is shown the treatment of dining-room service as a subdivision of the housekeeping department. It might then be worth while to divide account f with the others.

DE Entertainments

DF Cartage Department

(Subdivided somewhat as the stable account is subdivided)

DG Garage
- DGmg gasoline
- DGmo oil

DGmt maintenance of tires
DGmv maintenance of automobiles, not including tires
DGmz general supplies
DGsc salaries of chauffeurs (drivers who are also mechanics)
DGsd salaries of drivers
DGsm salaries of mechanics
DGso salaries of attendants

DI Gymnasium
DIsa salaries of attendants and rubbers
DIsi salaries of instructors
DIsz salaries of general employees

DJ Stable
DJmf feed
DJmh maintenance of harnesses
DJmr maintenance of robes, etc.
DJmv maintenance of vehicles
DJmz general supplies, including medicines, etc.
DJsd salaries of drivers
DJse salaries of messengers, etc.
DJso salaries of hostlers

DM Exhibitions
DN News-stand
DO Bowling Alley
DQ Card Rooms
DR Billiard Rooms
DT Tennis Courts
DV Golf Links
DW Baths
DWsa salaries of attendants
DWsi salaries of swimming instructors, etc.
DWsz salaries of other employees

DX Tennis Courts (a substitute symbol for DT, when DT is training school)
DY Bar
E All symbols beginning with E indicate capital accounts for departments having as their general

symbols the letters following the E. The departments will be found under the corresponding symbols. (See also pages 37–41).

HH Public Halls

HIO Interest on the Value of Sites and Grounds

I All symbols beginning with I indicate income accounts for departments having as their general symbols the letters following the I. The departments will be found under the corresponding symbols.

OA Advertising

OH Hospitality

OP Publications (not advertising)

PB Libraries for Research Work
(For subdivisions, see under DB)

PL Laboratories for Research

PO Observatories for Research

- POmp photographic supplies
- POmz general supplies
- POp postage
- POsc salaries of computers
- POso salaries of observers
- POsp salaries of photographers
- POss salaries of secretaries and recording clerks
- POsz salaries of general employees

SB Libraries for Students
(Subdivided similarly to DB—libraries for institutions not educational)

SC Instruction by Correspondence
(See subdivisions under SG)

- SCp postage

SE Instruction for Extension Students
(See subdivisions under SG)

SG Instruction Orally for Students in Residence

- SGm supplies (chalk, stationery, etc., for classes) and maintenance of equipment
- SGsa salaries of assistant masters or assistant professors

	SGsd	salaries of assistants, demonstrators, etc.
	SGsi	salaries of teachers or instructors
	SGsm	salaries of masters or professors
	SGsp	salaries of special teachers or lecturers
	SGss	secretarial service for teachers
SL		Laboratories for Students' Use
SM		Museums and Other Permanent Exhibitions
SO		Observatories for Students

APPENDIX B

Alphabetical Index of Common Items of Hospital Expense, with the Symbols of Accounts Chargeable

Alcohol	PMm
Ambulance supplies	DMm
Annual reports (printing and mailing)	CA
Apollinaris	DSmg
Apparatus, replacements only	PMa
Barge, cost of running	HZz
Bedding, replacements of	DHmd
Books, blank for hospital	AOm
blank, for treasurer's office	CM
reference (not text books) for nurses	PQb
text (not reference books) for nurses, not paid for by nurses	DTm
Bread, from outside	DSmb
Brooms	DHmz
Butter	DSmdf
Canned goods, not specified elsewhere	DSmg
Carbonated water	DSmg
Car fares	AOz
Care of flower beds	HL
Care of grounds	HL
Care of fruit trees	DSmff
Care of vegetable garden	DSmvf
Cartage	(See page 71, and also, below, Freight)
Cheese	DSmds
Coal, boiler-room	HF
kitchen use only	DKmf
laundry	DLmf
Cream	DSmdc
Crockery, replacements of, for bed-rooms	DHmd
for table	DHmt

Depreciation of buildings	HXB
equipment, dormitory	DHxd
equipment, table	DHxt
equipment, general household	DHxz
equipment, departmental	dept. symbol +x
Diplomas	DTm
Dispensary supplies	PDm
Egg preparations	DSmep
Eggs, culinary	DSmes
fresh	DSmef
Electric lighting	HE
Emergency ward supplies	PEm
Entertainment of nurses in training	DTm
Express	(See Freight)
Fertilizer (vegetable garden)	DSmvf
Fish, canned	DSmsc
fresh	DSmsf
smoked, dried, and pickled	DSmsd
Flower beds, care of	HL
Freight on building- machinery and ground-maintenance supplies	HZf
dispensary supplies	PDf
emergency ward supplies	PEf
furniture replacements	DHf
home nursing supplies	PHf
housekeeping supplies	DHf
kitchen supplies	DKf
laundry supplies	DLf
medical and surgical supplies and alcoholics	PMf
office supplies	AOf
pathological laboratory supplies	DPf
steward's supplies	DSf
training school supplies	DTf
X-Ray supplies	PXf
miscellaneous	AOf

Fruits, canned	DSmfc
dried	DSmfd
fresh	DSmff
Fuel	(See Coal)
Furniture and fixtures,	
office (replacements)	AOz
house (bed-room replacements)	DHmd
(dining-room, table replacements)	DHmt
(general replacements)	DHmz
Gas	HG
Ginger ale	DSmg
Gloves, surgeons' rubber	PMm
Graduation expenses	DTm
Grounds, care of	HL
Home nursing supplies	PHm
House and property miscellaneous expenses	HZz
Housekeeping, bed-room supplies	DHmd
dining-room, table supplies	DHmt
general supplies (not laundry, food, kitchen, or boiler)	DHmz
Ice	HO
Ice-cream	DSmi
Instruments, surgical—for nurses	PQa
for physicians	PMa
Insurance, hospital buildings (one year's proportion)	HN
departmental equipment, charged to dep'ts	
Interest (on mortgages and loans payable)	CI
Kitchen utensils—replacements and maintenance	DKm
Laundry bills (outside)	DLo
Laundry supplies	DLm
Lawn-mowing	HL
Legal expenses, corporation, in connection with investments, donations and legacies	CL
hospital, in connection with collection of bills, damage suits, etc.	AL

Linen, replacements of, bed-room	DHmd
table	DHmt
Machinery, replacements and repairs	HMQ
Magazines, (not for nurses)	AOz
(for nurses)	PQb
Meat, canned	DSmmc
dried	DSmmd
fresh	DSmmf
Medical supplies	PMm
Messenger service, not telephone or telegraph	AOz
telephone and telegraph	ATz
Milk	DSmdm
Miscellaneous administrative expense	AZ
Miscellaneous corporation expense (all expenses not provided for)	CZ
Miscellaneous house and property expense	HZ
Newspapers and periodicals(not for nurses)	AOz
(for nurses)	PQb
Office supplies (not stationery)	AOz
Oil, kerosene	HF
machine	HF
olive	DSmdf
Pastry, from outside	DSmb
Pathological laboratory supplies	DPm
Periodicals (not for nurses)	AOz
(for nurses)	PQb
Plumbing, repairs and replacements	HMP
Postage, annual report	CA
corporation (except annual report)	CP
hospital (not on annual reports or notices of meetings)	AOp
Poultry, canned	DSmpc
fresh	DSmpf
Printing, annual report	CA
corporation (not annual report)	CM
hospital (not annual reports or notices of meetings)	AOm

Property and house miscellaneous expenses	HZz
Renewals, house furniture and fixtures,	
dormitory	DHmd
table (dining-room)	DHmt
general	DHmz
office furniture and fixtures	AOz
machinery and tools	HMQ
surgical apparatus and instruments	PMa
Repairs of buildings (not including additions or permanent improvements or plumbing)	HMB
housekeeping property (See Renewals)	
machinery and tools	HMQ
plumbing and steam-fitting	HMP
Reports, annual (printing and mailing)	CA
Seeds, lawn	HL
vegetable garden	DSmvf
Snow-shoveling	HL
Soap, dish-washing	DKm
laundry	DLm
medicinal	PMm
scrubbing	DHmz
toilet	DHmd
Starch, corn	DSmcb
laundry	DLm
Stationery, corporation	CM
hospital	AOm
Steam-fitting, repairs and replacements	HMP
Stimulants (not flavoring spirits, carbonated waters, ginger ale)	PMw
Surgical instruments, replacements only	PMa
Taxes on property used for hospital purposes (other taxes charged to the income of the specific property)	HT
Telephone rental	ATz
Tools, repairs and replacements	HMQ

Uniforms, for nurses	PQu
Vegetables, canned	DSmvc
fresh	DSmvf
Waste (cotton, for boiler-room use)	HF
Water	HW
Wax, laundry	DLm
Wood, boiler-room and fireplace	HF
kitchen use only	DKmf
X-Ray supplies	PXm

APPENDIX C

Comparison of Accounts of the New York Plan of Accounting for Hospitals and the Plan Advocated Herein

Number of Account, New York Plan	Symbol of Account, Plan Herein
1	ASs
2	AOf, AOz
3	AOm, AOp, CA
4	ATs, ATz
5	AL
6	AZ
7a	PSd
b	PSns
c	PSng, PSnt
d	PSnp
e	PSo
f	PSop
g	PSw
8a	PQu
b	PQb
c	PQa
9a	PMa
b	PMm + alcohol
c	PMw − alcohol
10a	PDs
b	PDm
11a	PEs
b	PEm
12a	PHs
b	PHm
13a	PXs
b	PXm

14a	DMs
b	DMm
15a	DPs
b	DPm
16a	DTs
b	DTm
17a	DHs
b	DHmd, DHmt, DHmz
18a	DKs
b	DKmz, DKmf
19a	DLs
b	DLmz, DLmf
20a	DSs
b: bread	DSmb
c: milk and cream	DSmdm, DSmdc, DSmds, DSmi
d: groceries	DSmg, DSmfc, DSmfd, DSmfj, DSmfp, DSmvc, DSmcf, DSmcb, DSmdp, DSmh, DSmn, DSmt
e: butter and eggs	DSmdf, DSmef, DSmes, DSmep
f: fruit and vegetables	DSmff, DSmvf
g: meat, poultry, and fish	DSmmf, DSmpf, DSmsf, DSmsc, DSmsd, DSmmc, DSmpc, DSmmd
21	HE
22	HF
23	HG
24	HO
25	HMB, HL
26	HMQ, HSs
27	HMP

28	HR, or distributed to departments (not of importance for comparisons)
29	HN*
30	HZ
31	CS
32	CM, CP
33	CL
34	CI
35	HT
36	CZ

In primary accounts, it will be noticed, the two plans are not essentially different. The really important differences lie in the disposition of those primary accounts—that is, the distribution of them so that ultimately costs of various elements of service may be put on a unit basis.

* This is true only if all insurance is carried to HN, under the plan herein, before it is distributed in part to the departments having insured equipment. If one desires to know the total cost of all insurance, that should be done. That complicates the bookkeeping, however, and puts the emphasis on the expenditure rather than on the service—which sometimes leads to false economy.

APPENDIX D

The Bookkeeping Entries for Imaginary Transactions in a Hospital

In order to illustrate more concretely the actual bookkeeping processes, all the entries for a hospital making use of the accounts recommended here (except for a few departments which it is assumed not to employ—as an emergency department and a department of home nursing—and one or two which conditions do not require—because a few employees, boiler-room help, for instance, do not live on the premises) are shown in the following pages. All revenue and expense accounts are designated by symbols only. The figures used are approximate figures for a certain hospital for a year, but they are used here as if for a month. It is assumed that the voucher-register system with many special columns, and a special-column cash book, also with many columns, are used. The amounts shown for the first entry of expenses are supposed to be totals of special columns in one or the other of these books. Only one posting will be required each month for each account appearing on either of these books. All other entries are supposed to be taken from the journal, and are no more frequent than monthly—unless errors are discovered or adjustments are needed for new conditions arising. If the closing entries were made only annually, however, and these figures were actually figures for a year, the method would be the same as that shown here.

Following these are shown the general ledger and the

subordinate expense ledger. The accounts are designated by symbol only. From these can be seen how complete is the record and how little labor is made by the bookkeeping requirements of the many subordinate accounts. The trial balance is shown as it appears when all other accounts have been closed into the ultimate accounts.

Cash	287,750	
To IRBP		64,000
IRBW		50,000
IPSN		22,000
IPD		9,000
IDM		250
IZ		2,500
Subscriptions, etc.*		140,000

We assume that the capital assets are already on the books (shown in accounts having a single capital letter for a symbol), with a credit to the Capital Account (Proprietorship) amounting to $1,557,500.

The following is a single entry, as if in a journal, to express in summary form the debits to various expense accounts, from the cash book and the voucher register, and the credit to cash (either direct or from the payment of vouchers payable).

* The details of this item should be given in the ledger and in the report, of course, and should be given not on schedule V but on schedules B, C, and D. They are here combined merely to give a working cash item on the books, so that the bookkeeping details to follow shall not proceed with a credit item to cash.

ASs	16,000			*Brought up*	141,170		
AOf	100			DKmf	500		
AOm	3,500			DLs	5,000		
AOp	300			DLm	1,200		
AOz	40			DLmf	600		
ATs	2,300			DLo	50		
ATz	50			DSs	1,200		
AL	700			DSmb	500		
AZ	30			DSmdm	12,000		
PSns	5,800			DSmdf	10,000		
PSng	6,000			DSmef	5,000		
PSnp	18,000			DSmff	3,000		
PSnt	2,300			DSmfc	100		
PSo	5,000			DSmfd	450		
PSw	2,500			DSmvf	4,500		
PQu	2,500			DSmvc	200		
PQb	200			DSmmf	12,000		
PQa	100			DSmpf	9,000		
PMa	6,000			DSmsf	6,000		
PMm	11,000			DSmg	10,000		
PMw	2,000			DSz	700		
PMf	100			DSf	450		
PDs	4,000			HE	900		
PDm	5,000			HG	700		
PDf	50			HF	10,000		
PDz	25			HW	500		
PXs	800			HO	3,000		
PXm	500			HMB	10,000		
DMs	1,500			HL	2,500		
DMm	5,000			HMQ	1,500		
DPs	6,000			HMP	2,500		
DPm	1,000			HSs	2,290		
DTs	2,000			HN	6,000		
DTm	50			HZf	50		
DTz	25			HZz	100		
DHs	16,000			CS	2,500		
DHmd	4,000			CM	800		
DHmt	2,000			CP	300		
DHmz	1,000			CA	1,500		
DHf	200			CL	500		
DKs	6,000			CZ	1,500		
DKmz	1,500			To Cash		270,760	

The following entries are numbered to correspond with the discussion of closing entries on pages 170–187:

CLOSING ENTRIES

No. 1		
PMo	500	
DSo	2,300	
to HO		2,800
No. 2		
AOx	45	
HXB	30,000	
DHxt	90	
DHxz	1,200	
PMx	450	
DKx	300	
DLx	600	
DMx	150	
HXQ	1,200	
DHxd	390	
DSx	90	
DTx	60	
PXx	150	
To A		45
B		30,000
F		90
H		1,200
I		450
K		300
L		600
M		150
Q		1,200
R		390
S		90
T		60
X		150
No. 3		
AOi	45	
HIB	30,000	
DHit	90	
DHiz	1,200	
PMi	450	[*Cont.*]
DKi	300	[*Cont.*]
DLi	600	
DMi	150	
HIQ	1,200	
DHid	390	
DSi	90	
DTi	60	
PXi	150	
To ICIH		34,725
No. 4		
HL	25	
DSmvf	50	
HE	15	
To HS		90
No. 5		
TP	12,400	
To HF		10,000
HS		2,200
HW		200
No. 6		
DLmf	1,000	
DKmf	300	
PMp	4,000	
HP	7,100	
To TP		12,400
No. 7		
THS	50,675	
To HW		300
HO		200
HL		2,525
HMQ		1,500
HXQ		1,200
HIQ		1,200
HZ		150
DH*		43,600

* This amount was determined by taking the total DHs, DHmz, DHiz, DHxz, DHf, as shown by the subordinate ledger at this point, and adding an estimated figure for DHb, DHr, DHl.

No. 8		
ASr	1,200	
AOh	2,110	
PSrp	4,000	
PSrw	6,000	
PMh	3,000	
PXh	200	
DMh	300	
DPh	500	
DTh	425	
DHr	3,800	
DKr	1,350	
DKh	400	
DLr	375	
DLh	415	
DSh	350	
RHP	10,270	
RHW	15,980	
To THS		50,675
No. 9		
THC	87,215	
To HE		915
HG		700
HP		7,100
HMB		10,000
HXB		30,000
HIB		30,000
HMP		2,500
HN		6,000
No. 9a		
ASr	2,500	
AOh	4,200	
PSrp	9,000	
PSrw	12,000	
PMh	6,000	
PXh	500	
DMh	400	
DPh	1,400	
DTh	900	
DHr	8,000	
DKr	2,700	
DKh	800	
DLr	800	[*Cont.*]
DLh	900	[*Cont.*]
DSh	800	
RHP	15,000	
RHW	21,315	
To THC		87,215

This entry may be combined with No. 8, for the debit accounts are the same.

No. 10		
ASr	50	
PSrp	300	
PSrw	400	
DHr	230	
DKr	100	
DLr	100	
RHP	1,600	
RHW	2,000	
To DH		4,780
No. 11		
ASb	25	
PSbp	80	
PSbw	100	
DHb	75	
DKb	50	
DLb	50	
RBP	800	
RBW	1,000	
To DH		2,180
No. 12		
ASl	100	
PSlp	500	
PSlw	600	
DHl	400	
DLl	200	
DKl	200	
RLP	6,000	
RLW	9,900	
To DL		17,900
No. 13		
TB	94,500	
To DS		76,980
DK		17,520

No. 14		
U	2,000	
To DSv		2,000
No. 15		
ASb	6,700	
PSbp	6,000	
PSbw	9,000	
DHb	12,000	
DKb	3,000	
DLb	6,000	
DSb	280	
RBP	23,510	
RBW	28,010	
To TB		94,500
No. 16		
RSP	57,980	
RSW	65,900	
To PS		87,580
PQ		2,800
PM		33,500

(At this point the following groups of accounts in the expense ledger—PS, PQ, PM, DH, DK, DL, DS, HS, HZ—should be closed into the corresponding group accounts in the general ledger.)

No. 17		
RHP	235	
RHW	270	
To DH		505

No. 18		
RBP	60	
RBW	20	
To DS		80
No. 18a		
DK	20	
To RBP		10
RBW		10
No. 19		
DL	10	
To RLP		5
RLW		5
No. 20		
PDz	1,384	
DTz	459	
PXz	153	
DMz	153	
DPz	306	
RAW	24,450	
RAP	13,090	
To AS		26,575
AO		10,340
AT		2,350
AL		700
AZ		30

The general ledger, in skeleton form, showing the ultimate expense and income accounts, but not showing the final closing into Earnings, Endowment Income, Normal Current Income, etc., is shown below. As a convenient means of showing many accounts at once, each account, representing a ledger page, is here given a square or block. This should not confuse anyone familiar with the appearance of a ledger.

GENERAL LEDGER

A		B		F		H		I	
1,500	45	1,000,000	30,000	3,000	90	40,000	1,200	15,000	450

K		L		M		O		Q	
10,000	300	20,000	600	5,000	150	400,000		40,000	1,200

R		S		T		U		X	
13,000	390	3,000	90	2,000	60	2,000		5,000	150

Capital Account		Subscriptions, etc.		Cash	
	1,557,500		140,000	287,750	268,760

IRBP		IRBW		IPSN		IPD		IDM		IZ	
64,000		50,000		22,000		9,000		250		2,500	

ICIH		AS		AO		AT		AL		AZ	
34,725		26,575	26,575	10,340	10,340	2,350	2,350	700	700	30	30

PS		PQ		PM		PD	PX	DM
87,580	87,580	2,800	2,800	33,500	33,500	10,459	2,453	7,653

DP	DT	DS		DK		DH		DL	
9206	3,979	79,060	2,000	17,500	17,520	51,065	43,600	17,890	17,900
			76,980	20			4,780	10	
			80				2,180		
							505		

HE		HG		HF		HW		HO	
900	915	700	700	10,000	10,000	500	200	3,000	2,800
15							300		200

HP		HMB		HXQ		HXB		HL	
7,100	7,100	10,000	10,000	1,200	1,200	30,000	30,000	2,500	2,525
								25	

HMQ		HMP		HS		HN		HZ		HIB	
1,500	1,500	2,500	2,500	2,290	90	6,000	6,000	150	150	30,000	30,000
					2,200						

HIQ		THS		THC		TB		TP	
1,200	1,200	50,675	50,675	87,215	87,215	94,500	94,500	12,400	12,400

GENERAL LEDGER [*Continued*]

RHP	RHW	RBP	RBW	RLP
10,270	15,980	800 10	1,000 10	6,000 5
15,000	21,315	23,510	28,010	
1,600	2,000	60	20	
235	270			

RLW	RSP	RSW	RAP	RAW	CS
9,900 5	57,980	65,900	13,090	24,450	2,500

CM	CP	CA	CL	CZ
800	300	1,500	500	1,500

The subordinate expense ledger, in skeleton form, is shown below.

SUBORDINATE EXPENSE LEDGER

	Total	ASs	ASb	ASr	ASl
AS	26,575	16,000 / 16,000	6,700 25 / 6,725	1,200 2,500 50 / 3,750	100 / 100

	Total	AOf	AOh	AOm	AOp	AOi	AOx	AOz
AO	10,340	100 / 100	2,110 4,200 / 6,310	3,500 / 3,500	300 / 300	45 / 45	45 / 45	40 / 40

	Total	ATs	ATz
AT	2,350	2,300 / 2,300	50 / 50

SUBORDINATE EXPENSE LEDGER *(Continued)*

	Total		PSns		PSng		PSnt		PSnp		PSo		PSw		PSbp		PSbw	
PS			5,800		6,000		2,300		18,000		5,000		2,500		6,000 80		9,000 100	
	87,580			5,800		6,000		2,300		18,000		5,000		2,500		6,080		9,100

	PSrp		PSrw		PSlp		PSlw	
	4,000 9,000 300		6,000 12,000 400		500		600	
		13,300		18,400		500		600

	Total		PQu		PQb		PQa	
PQ			2,500		200		100	
	2,800			2,500		200		100

	Total		PMa		PMm		PMw		PMp		PMo		PMf		PMh		PMi		PMx	
PM			6,000		11,000		2,000		4,000		500		100		3,000 6,000		450		450	
	33,500			6,000		11,000		2,000		4,000		500		100		9,000		450		450

SUBORDINATE EXPENSE LEDGER (*Continued*)

	Total		PDs		PDm		PDf		PDz	
PD			4,000		5,000		50		25 1,384	
	10,459			4,000		5,000		50		1,409

	Total		PXs		PXm		PXh		PXi		PXx		PXz	
PX			800		500		200 500		150		150		153	
	2,453			800		500		700		150		150		153

	Total		DMs		DMm		DMh		DMi		DMx		DMz	
DM			1,500		5,000		300 400		150		150		153	
	7,653			1,500		5,000		700		150		150		153

	Total		DPs		DPm		DPh		DPz	
DP			6,000		1,000		1,400 500		306	
	9,206			6,000		1,000		1,900		306

SUBORDINATE EXPENSE LEDGER (*Continued*)

	Total		DTs		DTm		DTh		DTi		DTx		DTz	
DT			2,000		50		425 900		60		60		25 459	
	3,979			2,000		50		1,325		60		60		484

	Total		DSs		DSb		DSmb		DSmdm		DSmdf		DSmef		DSmff		DSmfc	
DS			1,200		280		500		12,000		10,000		5,000		3,000		100	
	79,060	2,000		1,200		280		500		12,000		10,000		5,000		3,000		100

	DSmfd		DSmvf		DSmvc		DSmmf		DSmpf		DSmsf		DSmg		DSo	
	450		4,500 50		200		12,000		9,000		6,000		10,000		2,300	
		450		4,550		200		12,000		9,000		6,000		10,000		2,300

	DSz		DSf		DSh		DSi		DSx		DSv	
	700		450		350 800		90		90		*2,000*	
		700		450		1,150		90		90		*2,000*

SUBORDINATE EXPENSE LEDGER (*Continued*)

	Total	DKs	DKb	DKr	DKl	DKmz	DKmf	DKh	DKl	DKx
DK	17,500	6,000	3,000 50	1,350 2,700 100	200	1,500	500 300	400 800	300	300
		6,000	3,050	4,150	200	1,500	800	1,200	300	300

	Total	DHs	DHb	DHr	DHl	DHmd	DHmt	DHmz	DHf
DH	51,065	16,000	75 12,000	3,800 8,000 230	400	4,000	2,000	1,000	200
		16,000	12,075	12,030	400	4,000	2,000	1,000	200

DHid	DHit	DHiz	DHxd	DHxt	DHxz
390	90	1,200	390	90	1,200
390	90	1,200	390	90	1,200

	Total	DLs	DLb	DLr	DLl	DLmz	DLmf	DLh	DLi	DLx	DLo
DL	17,890	5,000	6,000 50	375 800 100	200	1,200	600 1,000	415 900	600	600	50
		5,000	6,050	1,275	200	1,200	1,600	1,315	600	600	50

	Total	HZf	HZz
HZ	150	50	100
		50	100

	Total	HSs
HS	2,290	2,290
	2,290	2,290

Trial Balance

Capital Account			$1,557,500	
A	1,455			
B	970,000			
F	2,910			
H	38,800			
I	14,550			
K	9,700			
L	19,400			
M	4,850			
O	400,000			
Q	38,800			
R	12,610			
S	2,910			
T	1,940			
U	2,000			
X	4,850			
PD	10,459			
PX	2,453			
DM	7,653			
DP	9,206			
DT	3,979			
RHP	27,105			
RHW	39,565			
RBP	24,360			
RBW	29,020			
RLP	5,995			
RLW	9,895			
RSP	57,980			
RSW	65,900			
RAP	13,090			
RAW	24,450			
ICIH			34,725	
IRBP			64,000	
IRBW			50,000	
IPSN			22,000	
IPD			9,000	
IDM			250	
IZ			2,500	
Subscriptions, etc.			140,000	
CS	2,500			
CM	800			
CP	300			
CA	1,500			
CL	500			
CZ	1,500			
Cash	287,750		270,760	
	$2,150,735		$2,150,735	

It is interesting to see how schedule VI, for private-room patients and ward patients, works out in this case.

	Symbol of Account	Earnings	Expenses	Loss
Private-room patients	IRBP	64,000		
	IPSN	22,000		
		86,000		
	RHP		27,105	
	RBP		24,360	
	RLP		5,995	
	RSP		57,980	
	RAP		13,090	
			128,530	42,530
Ward patients	IRBW	50,000		
	RHW		39,565	
	RBW		29,020	
	RLW		9,895	
	RSW		65,900	
	RAW		24,450	
			168,830	118,830

Temporary Depreciation

Below is shown the working-out of the treatment of Temporary Depreciation, discussed on page 172, using medical and surgical facilities for illustration, and supposing normal wear and tear to require $100 a month. In case I, the expenditure is supposed to be $1,500 for the year, and in case II, $1,000.

CASE I

PMx	1,200*		
To TXi			1,200
TXi	1,500*		
To Cash			1,500
PMa	1,200		
To PMx			1,200
I	300		
To TXi			300
Balances:			
I	300	Cash	1,500
PMa	1,200		

CASE II

PMx	1,200*		
To TXi			1,200
TXi	1,000*		
To Cash			1,000
PMa	1,000		
To PMx			1,000
TXi	200		
To I			200
Balances			
PMx	200	Cash	1,000
PMa	1,000	I	200

It is not usually worth while to keep account of depreciation of plumbing and steam-fitting, for, if ordinary repairs are made and charged to maintenance (usually not varying much from year to year), equipment of that sort should last virtually as long as the building is used. If depreciation is actually suffered, on the other hand, it should be treated ultimately as a part of building depreciation (HXB), and then, after repairs are actually made, the ultimate debit should be to HMP (in place of HMB). For temporary depreciation, therefore, the only difference of treatment from that just described would be the substitution of HMP for HMB, for a part of the debit of the third entry, to cover the actual repairs. The depreciation, both HXB and TXb, would be regular.

* The sum of numerous entries scattered through the year.

APPENDIX E

*Report of the Committee on Uniform Accounting for Institutions**

The membership of this committee was intended to include representatives of various types of institutions and various aspects of institutional work. The committee has had a progressive rather than a constant life, for the membership has been enlarged as various phases of the work were attempted and advice upon them became necessary. Besides the chairman, the following, in the order of service, have had a part in the work of the committee: Miss Olive Davis, director of halls of residence, Wellesley College; Dr. Frederic A. Washburn, superintendent of the Massachusetts General Hospital, Boston; Dr. Roland H. Harris, member of the board of trustees of the Battle Creek Sanitarium; Mr. John L. Taylor, assistant comptroller of Harvard University, and treasurer of the Symmes (Arlington, Mass.) Hospital; Miss Florence Ruth Corbett, dietitian at Teachers College, Columbia University, and consulting dietitian for institutions; Mr. Edgar A. Fisher, purchasing agent of Earlham College.

This gives the committee, counting some members in more than one capacity when their work has had more than one aspect for the purposes of the committee, four representatives of hospitals, one representative of a sanitarium, four representatives of the food-and-shelter aspect of colleges, three representatives of the teaching aspect of colleges, and two accountants. Mr. Melvil Dewey, of the

* Presented at the Lake Placid Meeting of the Administration Section of the American Home Economics Association, June, 1912; published in *The Journal of Home Economics: Home, Institution, School,* December, 1912.

Lake Placid Club, has given the committee much help, particularly in the consideration of problems of clubs and hostelries.

A complete plan for uniform accounting would require a large volume for exposition and illustration. So many differences occur in institutions that doubtless fifty modifications of any uniform plan would be required even for the institutions represented in this conference. Uniformity of detail is not really uniformity at all, for details must differ where conditions differ; otherwise one cannot know that conditions are different, and the accounts will misrepresent the facts. What we mean by uniformity is uniformity of method—so that the same situation will be disclosed by the same figures, and differences of situation will be disclosed by differences—and concomitant differences—of figures.

For these reasons your committee has thought wise to recommend the adoption of certain principles that it believes essential to any sound accounting—whether for immediate costs, for studies of efficiency, or for purposes of comparison either within an institution or between institutions.

These principles may be stated concisely, as follows:

1. Capital accounts, so-called, should be kept for all permanent property and equipment—and that means a capital account for each department of the institution. The purpose of these accounts is to show not what the property is worth to-day for sale purposes, but what it represents in the way of cost, or investment, for the institution. These accounts indicate how much of the funds entrusted to the institution have been, and are now, locked up in permanent form. It is assumed that either the property has been maintained at its original efficiency, or depreciation has been subtracted from the original cost and charged as operating cost, or expense.

If in any institution the records of cost of permanent

equipment have not been preserved, a fair valuation of the property for use purposes (not for sale purposes unless early sale is contemplated) should be made. This valuation should have regard to three things—the cost of new equipment to do the same or substitute work, the probable life (or period of usefulness) of the old equipment, and the comparative efficiency of the new and the old. The important fact is to recognize the principle of valuation, for several things hinge upon it—as will appear in the discussion of other accounts.

The only objection to this plan is the fear that jealous citizens may agitate for taxation of tax-exempt institutions, or philanthropically minded persons may grow tight-fisted if they learn how much property institutions hold. The committee believes that even under such circumstances the figures should be kept on the books, but it may not be wisdom to publish them. On the other hand, a campaign of education may sometimes be profitably conducted by showing how big an investment is necessary to make possible the conduct of a proper public service. Greater contributions may result.

Directly related to these capital accounts are four, sometimes five, operating or expense accounts, and these should be kept separate for each department. These give us the following:

2. A maintenance account should be kept for each department. This should show all expenditures for repairs and replacements to keep the property in its original efficiency for service. The sum of these is an operating cost. If the property has been more than maintained, so that it has greater efficiency or longer life than before, the cost of the excess of service-value may be charged to the capital account of the department.

If, on the other hand, repairs and replacements have

not kept the property up to its old efficiency, this exhaustion of value is still one of the operating costs, or expenses, and must be counted. So far as cost, or expense, is concerned, it makes no difference whether one has replaced the wear and tear or not. The cost is the wear and tear itself. For convenience, we call the cost of restored wear and tear "maintenance," and actual (not restored) wear and tear we call "depreciation." A valuation, as already indicated for the capital account, assists in the annual answer to the question, Has the property been maintained? This is to be determined for a department as a whole, and not for each item of property—table leg, or sheet, or instrument. If the property and equipment of the department as a whole are as efficient (looking into the future, i. e., at durability, as well as at the present) as they were at the beginning of the period for which the books were made up, the property has been maintained and no depreciation need be considered. The cost of that maintenance is the charge to maintenance account. If, for an absurd but simple example, a building were so constructed that one-tenth of the cost were in the roof, one-tenth in each of three floors, one-tenth in each of four walls, etc., and it were good for ten years only, and you replaced the roof one year (though the rest depreciated), and a floor another year (though the rest depreciated), and so on, there would be no actual depreciation. You might go on in this way for a thousand years, always with a building as good as it was at the end of the tenth year, with correct showing of values and of costs; for though each year nine-tenths were allowed to depreciate, the tenth-tenth would be entirely replaced and charged to maintenance; and that would be as good, and indeed practically far better, than replacing one-tenth of the walls and of the floors and of the roof each year.

3. A depreciation account should be kept for each de-

partment; for, as just indicated, when depreciation has occurred, it must be counted as a cost; otherwise a superintendent or manager who exhausts the equipment will be showing low costs. Depreciation must also be deducted from the capital value of the property.

4. An interest account is desirable for each department. Each department should be charged interest on its equipment. This sounds like paying the left pocket from the right—like playing with figures. Yet only so can we know whether equipment is profitable. Expensive equipment may be put in to save labor; but no institution has a plethora of funds, and money spent for permanent equipment cannot be used for current accomplishment. If departments are not charged interest on their equipment, they are left with temptation to save a dollar in wages at the expense of two dollars in interest—for wages always show and the interest (in that case) will be hidden. Even if money is plentiful, neglect to charge interest will represent conditions unfairly in a comparison with other institutions unless actually the same proportional investment has been made in the various departments.

Obviously a valuation, as suggested for the capital account, is necessary for the calculation of interest on equipment. The rate of interest must be determined by local conditions. For our purposes, the important things are merely two: first, the recognition of the principle of interest as a department cost; second, a statement, in the published report, of the amount of interest charged to each department and of the *rate used.*

5. Departments should be charged for insurance on their property for the same reason that they should be charged interest. The use of property involves the cost of insuring that property, and a department unwilling to bear the expense should not be granted the right to purchase.

6. If taxes are paid, they should be charged to departments in the ratio of the value of the property held.

Obviously only when valuations of property are preserved on the books can one apportion insurance and taxes to the various departments.

So far we have been concerned only with direct costs—costs for which we know, or can easily tell, how much belongs to each department. Besides those just considered are the obvious items of salaries, supplies, express, stationery, printing, etc.

Your committee recommends that at least four joint costs—or costs common to several departments—be distributed among the departments concerned. These follow:

7. Food—including supplies, cooking, and serving—should be charged to departments separately. Food cost should be distributed among the departments and should be charged to each on such basis as in each particular case will show the actual cost to the institution of food consumed by employees "living in." Only when this is done can one tell whether "living in" is cheaper than "living out," and only then can one compare institutions operating under different conditions.

When different types of dietary are served to different classes of guests, inmates, or students, the food costs should be kept separate for each.

8. The cost of dormitory or sleeping provision should be determined for each department. This should be charged to each department on the basis of space occupied and service rendered for sleeping accommodations for its employees. The chief items so to be distributed are rent, heat, light, laundry, and care of rooms.

9. The cost of laundry should be charged to each department. This is meant to cover both laundry used by the

department itself, as operating-room laundry in a hospital, and laundry of employees of the department.

10. Department housing, or space cost, should be charged to each department. This includes rent, light, heat, cleaning, etc., for the quarters used by the department for the conduct of its business.

11. Your committee recommends that in some cases two items be subdivided within departments, as follows:

(a) The subdivision of pay-roll in some departments. When several classes of employees, serving different functions and receiving various rates of wages or salaries, are employed in any department, their salaries should be subdivided in such fashion as to make available statistical comparisons or cost figures for the different classes of work. In a hospital, for example, wages of graduate nurses, of nurses in training, and of orderlies, though all in the group of cost of care of patients, should be separately reported.

(b) Subdivision of supplies in certain departments. These should be divided into classes whenever such subdivision will give statistical information of value. Such information is the relative consumption of meat, of fish, of dairy products, of cereals, etc., under different conditions, and the cost of dietetic substitutes for any of these.

The above recommendations are made by unanimous vote of the members of the committee present at this conference. Dr. Washburn,* who was unable to be here, has expressed personally to the chairman his approval of the principles involved; but he has not had opportunity to see them expressed in this form. Miss Davis* has been abroad for some time, and has not seen this formulation, but has expressed her approval of most, if not all, of the principles.

Respectfully submitted, for the Committee,

WILLIAM MORSE COLE, *Chairman.*

* Since the meeting, both Dr. Washburn and Miss Davis have given the report their full endorsement.

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